REPORT

ON THE MEDICAL AND HEALTH SERVICES

1957

SIERRA LEONE

Price—**FIVE SHILLINGS**

PRINTED AND PUBLISHED BY THE GOVERNMENT PRINTER, SIERRA LEONE

REPORT ON THE MEDICAL AND HEALTH SERVICES FOR THE YEAR 1957

I—GENERAL REVIEW AND STAFF POSITION

During 1957, the acute problems raised by social changes due to the diamond boom, with the associated great increase in circulating money and population movement, have formed the main concern of the Medical Department. The immediate problems have been those of epidemic diseases, particularly of smallpox, and the need to import the staple foodstuff—rice—has led to problems of acute dietary deficiency. Increasing wealth in the hands of ignorant people has led also to abuse of medicine, particularly in the misuse of antibiotics administered both orally and by injection by unqualified persons or druggists.

2. The general improvement in road-communications in the last two to three years with the replacement of car-ferries by bridges, more road-building, and the great increase in motor traffic, have already had effects on the spread of epidemic diseases but may also be expected to affect the pattern and spread of important endemic diseases. Improved communications have brought more patients to hospitals, particularly in-patients, from places formerly beyond the reach of hospital services; but road accidents have greatly increased, occupying surgical beds that would formerly have been available for other conditions. All but one of the new hospitals are now opened or partially opened and it is clear that all will be subjected to great pressure on bed space.

3. There was a great improvement in numbers of medical staff with a welcome relief from the anxieties of previous years. At the end of 1956, the establishment of Medical Officers was up to strength with the help of some temporary contracts, and although the permitted establishment of medical officers was raised by five to fifty-five at the beginning, there were only two vacancies at the end of the year, and these two vacancies were to some extent offset by two part-time appointments of locally recruited practitioners. Nine full-time and two part-time medical officers were recruited, and six medical officers left the service.

4. Specialist and super-scale medical posts were also filled satisfactorily; two surgeon specialists were appointed, one of them an experienced Senior Specialist, and this filled the approved establishment of three specialist surgeons. The increase of surgical strength together with the full establishment of two Physician Specialists, has resulted in a marked improvement in the standard of treatment, particularly of surgical treatment. Cases that formerly would have been sent to hospitals abroad have had very satisfactory treatment in Sierra Leone. Of the super-scale medical posts only two remained unfilled throughout the year, that of Senior Pathologist and the newly created post of Specialist Anaesthetist. During the year the standard of technical work in the pathological laboratory was improved by the appointment of two well qualified laboratory superintendents, one a Sierra Leonean who had good experience and training in the United States of America, and one overseas officer from the United Kingdom.

5. It was decided at the end of the year that the proposed Specialist Anæsthetist on the establishment should be replaced by an anæsthetist on the ordinary medical officer scale, with adequate anæsthetic experience.

6. An additional post of Senior Medical Officer of Health for the Protectorate was created during the year. A Medical Officer with the Diploma in Public Health has acted in the post for the last six months. The Assistant Director of Medical Services' office at Bo has been found to be a hindrance rather than a help now that communications with the Protectorate have improved and the Assistant Director of Medical Services was moved to the Headquarters office in Freetown.

7. Seven Medical Officers were granted study leave. Three (one overseas and two Sierra Leoneans) completed a course for the Diploma in Tropical Medicine and Hygiene; one (overseas) took the Diploma in Tropical Health, three are still pursuing studies, two Sierra Leoneans for the Diploma in Public Health and Diploma in Ophthalmology, one overseas officers for the Diploma in Tropical Medicine and Hygiene. In addition one overseas medical officer with a foreign degree obtained the Scottish Triple qualification and one other overseas officer studied for the Diploma in Public Health within his normal vacation leave.

8. The actual expenditure on the medical and health services in 1957 amounted to £725,394 for a population of a little over 2,500,000. This is exclusive of development projects and allows a little over 5*s.* 9*d.* per head of the population. The increase in expenditure for this department has risen from £90,000 immediately before the last war to £725,394 in 1957.

II.—TRAINING OF NURSING AND AUXILIARY PERSONNEL

9. As in previous years, nurses and midwives were trained at Freetown, Bo and Magburaka. There is a dispensers' school in Freetown, and a school for Health Inspectors at Bo.

10. For some years recruitment of overseas nurses in Sierra Leone has stopped and for an establishment of 21 nurses of the grade of Nursing Sister and above for which State Registration is required, only five overseas nurses of the Queen Elizabeth Nursing Service remain. There are a total of 33 Sierra Leoneans in the Service who are State Registered.

11. Though the position in the higher grades of Staff Nurses and Nursing Sisters is reasonably satisfactory, the standards of nursing and of nursing training in the lower grades of nurses and student nurses leaves much to be desired, and it has proved very difficult to build up an adequate body of trained and experienced nurses. There are two reasons for this; firstly, the standard of pupils from the secondary schools who come into the nursing schools is often very low, for which the increasing demand for skilled work caused by post war development demand has exceeded supply; secondly, recruitment of student nurses is nearly equated by losses of nursing staff, during and just after training. Some of these losses are inevitable, due to family reasons such as marriage, and to unsuitability for training but the most serious loss is of girls who have just received their local training, who would be about to give their most useful service to the department who go to the United Kingdom into nursing schools there in order to achieve State Registration. So long as training up to the standard of State Registration is not available in Sierra Leone this loss is inevitable. Even if State Registration were possible here, girls with any ability would still seek training in the United Kingdom so long as the present demand for nurses there persists. There is a Nursing Students Advisory Committee which is intended to deal with nurses seeking posts in the United Kingdom, and suitable nurses are given leave without pay whilst training for State Registration.

12. At present an attempt is being made to overcome these difficulties by substantially increasing the establishment of higher grades in order to provide suitable posts for Sierra Leoneans who have achieved State Registration and, equally important, to provide good prospects for promotion for these nurses who remain after local training.

13. A residential school for 32 female nurses was under construction at Bo hospital throughout the year at an estimated cost of £16,000. The residences are of utility standard and the hostel with lecture room, etc. is nearing completion. Use has been made of Magburaka as a training hospital because quarters for junior staff have been built there. The training school in Freetown is non-residential and nurses live in the town with their families and in lodgings.

14. A scholarship was awarded to one Sierra Leone Nursing Sister for the Royal College of Nursing course for a Sister Tutor's certificate, and posts for Sister Tutors are being created.

15. The training of male nurses is still complicated by the arrangement in Sierra Leone that all nurses should take the Druggists' Certificate (which permits them to be licensed under the Medical Practitioners and Druggists Ordinance) and so become Dispensers. This has been the only possibility for promotion for the male nurses. The Gorsuch Commission on the Civil Service, recommended during the year that the entry into the service and promotion of pharmacists and dispensers should be separated from that of male nurses who should have opportunities for promotion as nurses or medical assistants. This recommendation has been accepted by Government.

16. The Nurses and Midwives Boards held their first meetings during the year to form rules governing the training and discipline of nurses and midwives.

17. Village Maternity Assistants were trained in all Protectorate hospitals. In the original scheme it was intended that the native authorities where they worked should be responsible for their payment but it was found that the Native Administrations failed to pay regularly and they are now to be paid from a departmental head of expenditure. Fifty-three passed the qualifying examination at the end of the course and returned to their villages to work among their own people.

18. The training of Health Inspectors is based upon the school in Bo, but their training in the first place is strictly practical. Events in public health work have forced the department to use Inspectors-in-Training for urgently required field-work but this will be backed up by formal instruction.

19. U.N.I.C.E.F. assistance in equipment and books has been received for training nurses, midwives, village maternity assistants and health inspectors.

20. With the appointment of a supernumerary Overseas Laboratory Superintendent it has been possible to organise a course of instruction in laboratory technology, in evening classes organised by the Technical Institute. This course, combined with supervision of routine work in the laboratory is intended to lead to the Intermediate Examination of the Institute of Medical Laboratory Technology.

21. Summary of staff training schemes:—

(*a*) Three training schools for nurses at Freetown, Bo and Magburaka. Twelve nurses qualified in 1957.

(*b*) Midwives trained at Freetown and Bo. Nine midwives qualified in 1957 and were registered.

(*c*) Training of dispensers to be re-organised. Ten passed the Druggist examination in 1957 and were granted certificates.

(*d*) Health Inspectors are trained in Bo, the emphasis being on field duties.

(*e*) Training of Village Maternity Assistants—all hospitals co-operated in the training Fifty-three passed the qualifying examination at the end of the course and returned to their villages for work among their own people.

(*f*) One Health Superintendent-in-Training and one staff nurse completed a course in the United Kingdom arranged by N.A.P.T.

(*g*) Training of tuberculosis nurses at Lakka—seven completed three years local training in 1957.

(*h*) Laboratory technicians and Entomological Assistants received three years course of local training. Training courses in process of re-organisation to bring up to approved standards.

22. The following scholarships were held in the United Kingdom during the year:—

Medicine	22
Dentistry	4
Pharmacy	1
Radiography	4
Laboratory Technology	2
Sister Tutor	1
Dental Mechanics	2

III—PREVENTIVE AND SOCIAL MEDICINE

(*a*) General

23. During 1957 the rapid social changes and instability caused by the inadequately controlled development of diamond mining still presented the chief problems in public health and social medicine. By the end of 1956, very large numbers of Africans from a large area of West Africa extending from the Atlantic Coast to Northern Nigeria, South of the Desert, had been attracted into the South-eastern Province seeking their fortune from diamond digging, or from trade brought by the diggers. In November, 1956, Government had taken action to remove " strangers " or " native foreigners " from the diamond digging areas in the South-eastern and South-western Provinces and some 40,000 people left the areas and dispersed within a month. Smallpox had been concealed in the insanitary mushroom settlements that had grown up, and this dispersal of population resulted in a serious and widespread epidemic of smallpox.

24. The situation again became critical when a raid was made by " diggers " and others upon the Sierra Leone Selection Trust's plant. This led to very firm police action and administrative control in the South-eastern Province, with permanent posting of a strong police force to protect the Selection Trust's lease with restriction of entry or of residence in diamond protected areas to persons ordinarily resident there, or with official permits to reside there. Immediate sanitary action was again taken as in 1956 to remove insanitary dwellings that had been vacated, but this year the task has been more difficult, as the new buildings were constructed with corrugated iron sheets and so could not be burnt down. In most villages affected, it has been amicably arranged that the Native Authority will remove the buildings and hold the salvaged " pan " in store, but in one or two where the Native Administration is un-co-operative, the Health Department acts under the Public Health Ordinance to seize all building materials of any value as a contribution towards cost of demolition.

25. In the areas leased to the Sierra Leone Selection Trust where diamond digging and dealing except by the Trust, is completely prohibited, and a strong resident police force is enforcing the law, the worst sanitary problems should come to an end, and these particular areas formerly presented the most difficult problems. Police in the area are to be accommodated in permanent camps.

26. Outside the prohibited areas, where licensed diamond mining is permitted, very serious problems remain. The majority of mining settlements are still overcrowded and completely insanitary. Sanitary conditions need to be created for licensed miners engaged on what is now a legitimate occupation and for legitimate trade attracted by such money as is made by the miners. The department is still handicapped by inadequate public health law, and inability to apply building regulations, but some progress is being made, equipment ordered in 1956 began to arrive at the end of the year. Also stronger police and administrative action is having its effect in removing lawless people and reducing the problem to workable proportions. It has been possible to remove a great number of insanitary dwellings also in these areas but the position will remain unsatisfactory until constructive work can be undertaken in the provision of sanitary dwellings and villages for the licensed mining community.

27. Work in environmental sanitation continues to be handicapped by out of date legislation, the multiplicity of health, sanitary and local government authorities, and confusion due to administrative changes. Sanitary administration was handed over to the District Councils on the 1st January, 1954; the District Councils are not the Health Authorities appointed by the Public Health Ordinance. Government staff were originally assigned to the District Councils, but have now reverted to the administration and direction of the Medical Department. District Councils are still responsible for employing sanitary labour.

28. In Freetown, the Freetown City Council decided that they were unable to take over the routine sanitary duties in their city. The Council performs no sanitary functions, and the Medical Officer of Health ceased to be a Nominated Member on the Council, where he could serve no useful purpose in his official capacity. The Senior Medical Officer (Health) drew attention to the deterioration of Freetown sanitation due to continued uncertainty and consequent lack of decisive action.

29. Bo town presents a contrast. The Health Development Officer, South-western Province reports:—

> " Bo continued to be perhaps the most rapidly expanding town in the country. Special Health Authority meetings were frequent and I attended every one in an advisory capacity. Town planning continued to be a major and satisfying part of the department's work. Our work in this respect was enhanced by the keen interest and co-operation of the Town Council. I continued to be a co-opted member of two of the Council's committees dealing with health and planning."

30. In the Provincial Health Areas, there is a general complaint of reduction of sanitary labour and inadequate sanitary labour owing to the inability of District Councils to pay.

The Health Development Officer, Northern Province reported:—

> " *Labour*.—Labour establishments in all Health areas was far less than sufficient to cope with work involved to achieve maximum results in the improvement of the towns. In consequence there was difficulty in all areas in conducting such works as refuse disposal, street and drain cleaning and debushing of open areas."

In the whole of the Northern Province about 100 sanitary labourers were employed by District Councils and 4 labourers by Native Administrations. Magburaka, the Provincial Headquarter town had only 13 labourers and Makeni 17. The large town of Lunsar adjacent to the Marampa Mine had only 12 sanitary labourers.

The Medical Officer, Makeni reported:—

> " Makeni is a large busy trading centre with a population of about 12,000. Many new buildings are under construction. The old grass and thatched roof houses are giving way to modern mud and concrete blockbuilt houses with corrugated iron sheet roofs. The town generally is untidy. The streets are in the main very dusty during the dries. In the rains they are covered with large pot-holes with pools of water here and there. These often serve as breeding grounds for mosquitoes. The work of the health inspector is hampered owing to a general shortage of funds in the District Council for health services. This is a town capable of development were money available for the employment of more Sanitary Labourers than is possible at the moment."

The Medical Officer, Pujehun reported:—

> " There was a reduction in the number of labourers employed by the District Council during the latter part of the year. Out of 13 labourers in Pujehun nine were retrenched. Out of the three in Sulima one was retrenched. Both the labourers in Potoru were retrenched. These measures were taken by the District Council because of lack of funds."

31. Despite these difficulties in maintaining town and village sanitation, there continues to be considerable progress in the planning and rebuilding of towns. All over the country in the large towns and villages mud walls and grass roofs are giving place to concrete block walls and permanent roofing materials.

32. In the South-western Province four plans were drawn up for Koribundu, Mattru Jong and Baoma. This work is handicapped by the fact that only two surveyors for work of this kind are available for the whole of the Provinces, though some work is done by Health Inspectors. In the Northern Province new layouts were surveyed in Basaya and Nimikoro in the Tonkolili Valley to accommodate people evacuated from the Sierra Leone Development Company's leased area, and in Koinadugu District, apart from work done on the health development of declared Health Areas, fifteen villages were properly planned and developed. One of these, Bafodia was provided with a pipe-borne water supply by the American Wesleyan Mission and two others Heremakono and Kayagala were provided with pilgrim wells, the construction of which was financed from Minor Health Improvement funds.

(*b*) Health Education

33. During the year, the newly formed Sierra Leone Broadcasting Service asked that weekly talks should be given by a " Radio Doctor." This has been given by a rota of speakers from the Medical Department experimentally, but no local counterpart of Dr. Charles Hill has yet been discovered. The value of the Radio Doctor for particular subjects, such as informatory talks on "Asian flu ", or on the need for smallpox vaccination has been clearly demonstrated, but a weekly talk on a variety of subjects is of more doubtful value. There is no doubt that the local Broadcasting Service is potentially of the greatest value, and these talks are invariably translated into Temne and Mende; it seems difficult for many speakers, however, to appreciate that very simple repeated talks are required, addressed to illiterate villages, and not university extension lectures. Talks and news of the right type properly given are listened to with great attention in many villages.

34. The Nigerian Information Service's film on smallpox, was shown in vaccination campaigns and proved to be of the greatest value. Showings of the film were advertised over the broadcast, and vaccinators were ready at the end of each performance. It was usual for as many as 200 people to present themselves for vaccination after a performance. A locally taken 35 mm colour transparency of a smallpox case was also extremely effective when projected.

35. Health Development Officers have been appointed in connection with the development of environmental sanitation and increased use by them of cinema projectors and loud-speakers vans in health education is proposed.

(*c*) School Medical Services

36. The only specifically appointed school Medical Officer remains in Freetown. Increasingly in recent years, the Freetown School clinics have tended to become additional casualty departments to the hospitals. Freetown primary schools continue to be so overcrowded, and so insanitary that there appears to be little chance of an effective school medical service until the building programme for schools permits better condition. Elsewhere, Medical Officers and Health Sisters visit schools and advise concerning the health of school children, but there is no organised School Medical Service.

37. A Government Dental Surgeon, at his own request, visited a number of schools examining teeth and giving needed conservative treatment. These visits were welcomed by both teachers and pupils, and with an increased establishment of Dental Surgeons it is proposed to start regular dental inspection of some schools.

(*d*) Infant and Child Welfare

38. A Lady Medical Officer was posted to Magburaka Hospital to supervise the Maternity Services and establish maternity and child welfare clinics, and to organise and supervise the training of Maternity Assistants and the conduct of midwifery in the new Health Centres. She was assisted by a Health Sister (with a Health Visitors Certificate) posted to Makeni.

The success of her work has been in some ways embarrassing, as it has clearly demonstrated defects of designs in a new hospital, as well as the known inadequacies of the old ones. Women with their children have attended clinics in hundreds, but in the Magburaka hospital they are most unwilling to use the ordinary out-patient-clinic, but go to the maternity ward at the back of the hospital which they regard as their own. At the old hospital at Makeni, the same desire for attendance by female staff in a place separate from that used for treatment of out-patients which include men has been noticeable. The immediate success of these clinics, particularly in Magburaka where there was no hospital until recently, demonstrates the real need for Lady Medical Officers and higher grade female nursing staff.

39. In Freetown during the year the Maternity and Child Welfare Clinics were moved to the Princess Christian Maternity Hospital from the Maternity Hospital adjacent to the Connaught Hospital and later in the year all maternity services were moved to the Princess Christian Maternity Hospital where a new ward has been opened. On the whole the movement has been satisfactory, though the old Princess Christian Maternity Hospital buildings will never be perfect and sooner or later must be replaced, but the worst congestion in the clinics in the Oxford Street building is relieved and there is much more space at the Princess Christian Maternity Hospital.

40. Nearly all hospitals in the provinces now hold some form of Infant Welfare Clinics. An important feature of these is the distribution of UNICEF skimmed milk which after a slow start is becoming popular. A total of about 15,000 mothers and children received free issues in 1957.

(*e*) Dental Health

41. Four dental surgeons were employed in an establishment of six. A number of Sierra Leoneans are training as dentists and dental mechanics. The two dental clinics in Freetown and one at Bo worked satisfactorily but all the dental staff complain that too much of their time is taken up with the removal of hopeless teeth and treatment of neglected mouth infections, and there is too little opportunity for conservative dentistry. Reference is made at paragraph 37 to the successful pioneer work of one Dental Surgeon; further progress will depend upon the organisation of a school medical service with dental inspection and instruction and practice in dental hygiene.

(*f*) Mental Health

42. Dr. the Honourable W. S. Maclay of the United Kingdom Board of Control visited to advise on the acute problem of the Kissy Mental Hospital, and the treatment of mental diseases generally. His Report, which has been accepted in principle by Government has recommended the appointment of a Physchiatrist and other staff improvements; certain essential improvements in accommodation in Kissy the establishment of small blocks of single-bed wards in provincial hospitals, for the short-term confinement of patients with acute mental illness, and the provision of better accommodation for those patients for whom care and treatment is of much more importance than strict incarceration as dangerous lunatics or criminals. A phased plan of development in accordance with the recommendation is being worked out.

(*g*) Institutions

43. The King George V Memorial Home incorporating the Male and Female Infirmaries and the Leper Home was handed over to the Social Development Department during the year. It has been approved that this home should be developed and better facilities provided for the chronic sick from all parts of the country.

(*h*) Prisons

44. An investigation was made during the year into nutritional defects at the Freetown Prison. It was found that nutritional skin diseases of the *B* deficiency type, increased with the duration of imprisonment. This defect appeared to be due to failure to supply the recommended scale, and bad cooking, leading to wastage. A serious outbreak of Beri-beri in the prison occurring at the end of 1956 was investigated and found to be due to the use of imported Burmese, rice which was old and deteriorated; the use of imported rice is contrary to the medically recommended dietary scale. Remedial action has been taken but the quality of imported rice is of general importance, and not only for institutions, so arrangements for regular analysis of samples from imports have been made.

45. With the increased Prison population resulting from disturbances and lawlessness in the Provinces, dangerous overcrowding occurred in a number of prisons. This was brought to the notice of Government, and temporary camps as well as permanent extensions to some prison buildings brought relief, and reduction of the worst overcrowding. Overcrowding in the Central Prison at Freetown and in some other prisons appears to be parmanent, and will not be relieved without extensive new buildings.

(*i*) Vital Statistics

46. Without a full and up to date census it is not possible to give accurate vital statistics of birth rates and death rates. Available vital statistics of births and deaths are given in Part II of this report. Only a very small proportion of deaths are medically certified by qualified medical practitioners and therefore detailed statistics of mortality from the principal diseases cannot be given, but records of diseases and deaths in Government hospitals indicate the most important observed causes of diseases and mortality. The recorded infant mortality rate in Freetown was 141.14 infant deaths per 1,000 live births. There was a total of 553 infant deaths (under one year) of whom half died in the first month of life. Outside Freetown where maternity services are still relatively undeveloped infant mortality is believed to be very high. As in previous years a difference in infant mortality between the Sierra Leone indigenous tribes living in Freetown and the Creole population of the town is recorded. This may be in part due to a fuller registration of births by the more literate Creole population but is probably also due to a real social environmental influence —*see* Table IV Part II of Report.

47. The Infant mortality of different racial groups recorded has been summed over five years in Table II Section 5 Part II of Report.

48. A more comprehensive rate for Freetown Infantile Mortality, including statistics from the suburbs of Kissy, Wilberforce and Murray Town is 152 deaths per 1,000 births (Table II) Section 5 Part II of Report.

IV—ENDEMIC AND EPIDEMIC DISEASES

Yaws:

49. The World Health Organisation—U.N.I.C.E.F. Yaws Campaign continued for the second year, and a new plan approved to survey and treat yaws in the South-eastern Province along the Liberian border, as it was represented by the Liberian Authorities at a World Health Organisation conference that a great deal of yaws came across the border from Sierra Leone. Surveys along this border so far have not supported this statement, and the incidence appears to be as low as was expected. Progress of the campaign was interfered with by the outbreak of smallpox which was considered to be so serious that teams had to vaccinate instead of treating yaws. By the end of the year chiefdoms in Kailahun district had been treated and surveys were started in Kono District in the South-eastern Province. In the Northern Province re-surveys of the difficult country in Koinadugu showed a satisfactory reduction in yaws. This campaign had already substantially affected the pattern of disease-treated in hospitals. Before the 1939–45 war, yaws equalled malaria as the most common infectious disease that was treated. The four most common complaints treated were malaria, yaws, chronic rheumatism and ulcer of the skin. Some 6,000–9,000 cases being treated every year, with exceptionally large numbers of 14,000 and 16,000 cases in 1929 and 1930, when the injection of arsenicals was first started. The numbers of yaws cases have remained at between 7,000 and 12,000 new out-patient cases per year with between 20–40 in-patients treated up till 1956. This year, in-patients have dropped to only 2 and new out-patient cases have been cut to half the number treated in 1956, 3,902 as against 7,791, and are nearly one-third the number treated in some post-war years. This reduction in numbers has occurred in spite of the general increase of patients treated at the hospitals.

50. If the hospitals most affected by the yaws campaign are considered the reduction is yet more striking, and it appears that there is also reduction of tropical ulcers, one of the commonest and most troublesome diseases treated in hospitals. In the four hospitals Kabala, Makeni, Magburaka and Port Loko most affected by the campaign new out-patient cases of yaws and ulcer have been as follows over the past years. Yaws and Ulcer Out-patient new cases treated in four Northern Province Hospitals.

Year	*Yaws Out-patient*	*Ulcer Out-patient*	*Total Out-patient Cases*
1953 ..	3,774	2,140	29,533
1954 ..	4,939	3,085	33,906
1955 ..	6,072	3,153	34,317
1956 ..	4,873	1,892	37,226
1957 ..	1,695	1,513	43,377

Magburaka hospital opened in 1956 and only figures for the last quarter of 1956 and the whole of 1957 from this hospital are included.

51. Further figures for all hospitals are given in Appendix II. 4,000 yaws cases, the number by which the total has been reduced in one year, would account for about 12,000 total attendances of out-patients at hospitals.

52. The Medical Officer-in-charge, Yaws Campaign has reported:—

> " The initial treatment survey in the Northern Province began again on September 1st after the first re-survey was finished. Eight chiefdoms to the North and West of Makeni were treated, all in Bombali District. The number of people seen was satisfactory judging by the number expected as calculated by the usually accepted formula. The amount of infectious yaws found 1 per cent was rather less than was expected. In the neighbouring chiefdoms in 1956 and the first half of 1957 a high prevalence of yaws had been found while September and October are believed to be the months when yaws is most frequent. The presence of a popular mission hospital and a lower density of population in the new area may account for the difference."

53. A pilot survey had been carried out in four widely separated villages in the South-eastern Province by the World Health Organisation staff a total of nearly 3,000 people having been seen. The findings are of interest as this was one of the few surveys by skilled staff in recent years. Although there were no treatment centres in any of the four villages, each village is within reasonable walking distance of a centre and each village is on the motor road. Virtually no infectious yaws was found in adults; the rate in children varied from 0.5 per cent to 1.5 per cent. About 1 per cent hyperkeratosis was found in children, the rate in adults varied from 5 per cent to 12 per cent. Late active yaws was rare but late inactive yaws reached 17.1 per cent in adults in one village. For various reasons total mass treatment was decided upon and from April to Spetember 73,000 persons were injected. So little active yaws was found that from October onwards selective mass treatment was used and a spot seriological survey in the area was started. Only a few bloods have been examined up to the end of the year but the results so far suggests that selective mass treatment is justified.

54. The first re-survey in the Northern Province began at the end of November, 1956 and was completed in August, 1957. April, May and much of June were taken up with vaccination duties. There is no doubt that a re-survey is a very important part of the campaign. Not only should the majority of the few infectious cases be discovered and treated before they can disseminate the disease afresh, but the findings should indicate whether the initial treatment survey has been successful or whether the method adopted should be changed.

The difficulty of carrying out an efficient re-survey is even greater than for the initial treatment survey and it has not been to find a satisfactory method. In the three chiefdoms re-surveyed at the end of 1956 and the first three in 1957 tc tal mass treatment was used, but by February, 1957 it was realised that the prevalence of infectious yaws being recorded was so low that case treatment was substituted. This record of low prevalence in the extreme north-east corner was probably accurate. In the villages examined by the medical officer no infectious yaws was found. Case treatment meant that very few people received an injection of penicillin so that very few came for examination; the pair of attendants who visited a village had very little work to do and an injection of penicillin for the first time could not be obtained for the asking. There is no evidence that injections were ever sold for money but it is highly probable that a person wanting an injection could convince a young attendant that he had hyperkeratosis or late yaws or may be joint pains. If this went on a long scale it would make nonesense of statistics.

55. As so few injections were given, the attendants worked singly and not in pairs. This reduced the time taken for the re-survey; it reduced the cost per area but not per month and it increased the area over which the team was working making supervision more difficult when it was needed most. At this point the one field officer went on leave.

56. There is one difficulty of a re-survey that is not so obvious to the planner. The diagnosis of yaws can be very difficult and it is always pleasant and not uncommon to see an acknowledged expert completely stumped by planter lesions which in a mass campaign are frequently met. During the total mass treatment these cases are not very important. They will receive penicillin and their numbers will not significantly affect the statistics of the campaign. In a re-survey not only are they more significant but added to them are genuine cases of hyperkeratosis who have received previous treatment but in whom some evidence of previous disease exists. The pupils at one school numbering 250 were re-surveyed with the greatest care. Over 90 per cent of the planter lesions found were of the doubtful variety due perhaps to yaws active or not, jiggers, older recent trauma or other unspecified conditions. An accurate serological investigation of a large number of such cases might help to solve the problem.

57. At the beginning of 1957 an improved system for recording results was introduced in that yaws was divided up into " Infectious " " hyperkeratosis " and " others ". This last category was an omnibus group into which in the re-survey a mass of probably unrelated conditions were placed and it has been omitted from the re-survey findings. In the great majority of chiefdoms re-surveyed very little active yaws was found; but in three chiefdoms the amount of infections in children was unpleasantly high. The amount of yaws found in these three in the initial treatment survey was certainly high but it was believed that in them the first mass treatment had been efficiently done. It is uncertain how much reliance can be placed on the figures; a few cases of infectious yaws are reporting to a treatment centre in the area where penicillin is available but the returns from Makeni Hospital in the centre of this area show a very large fall in the amount of yaws treated. An opportunity for skilled staff to re-examine a number of villages here in connection with a leprosy survey will arrive in the new year. A decision on future activities will be based on this and other evidence.

Trypanosomiasis:

58. No increase of this disease has been noticed, but the conditions in which diamond miners work, on the banks of streams that Dr. Hutchinson has described as potentially dangerous, if social conditions lead to close man-fly contact with introduction of infection, remain disquieting.

Leprosy:

59. An initial leprosy treatment survey is at present being undertaken in the Northern Province with the assistance of the British Leprosy Relief Association.

60. A leprosy lay-worker Mr. Waudby was appointed by British Leprosy Relief Association and Dr. Ross Innes, the Medical Secretary of the British Leprosy Relief Association visited Sierra Leone. Mr. Waudby assumed duty in October and has toured the country widely making a preliminary survey prior to the survey to be conducted by Dr. and Mrs. Charles Ross from Northern Nigeria who arrived in December to conduct a three month survey. Depending on Dr. Ross's findings and his advice, a plan for dealing with leprosys is to be put up in 1958, probably in association with a scheme for U.N.I.C.E.F. aid.

61. In the meantime, initial work is being carried out by Mr. Waudby with Headquarters at Mabonto in the Tonkolili District. The initial treatment has started with funds provided by this government and it is proposed to build a leprosy headquarters and training centre for leprosy field workers at Massanga in the Tonkolili District where a site and buildings have been acquired. It is hoped that by the time the campaign is due to commence the centre will be ready for training of personnel and also for providing treatment. The initial treatment is being carried out in the Northern Province and it is hoped that treatment will be carried out in each of the other Provinces in turn.

Malaria

62. Mr. R. Elliott, Entomologist of the Malaria Service of the Federal Medical Service of Nigeria visited Sierra Leone to survey and report on the present status of entomological control of malaria in Freetown. The survey was financed by the West African Council for Medical Research. The report noted that over the past seven years, there has been a reduction in staff and expenditure upon malaria control, but with improved organisation a marked increase in the efficiency of entomological control. The assessment of human malaria requires further attention.

63. Anopheline densities recorded during the rains were lower than have been recorded in recent years. This may be due in part to the late onset of the rains and to the reduction in the period of intermittent rain which is particularly favourable to breeding of *A. gambiæ* Apart from a high parasite rate at Lumley school the parasite rate recorded in school children remained at the same level as in previous years.

64. In an investigation into susceptibility of local *A. gambiæ* to B.H.C. and D.D.T., Mr. Elliott found that resistance of larvae obtained at Wellington to D.D.T. was higher than any so far examined in the Lagos Laboratories, but he noted that no true resistant strain to D.D.T. had been found anywhere. The resistance to D.D.T. in *A. gambiæ* larvæ from Wellington was measured and the L.C. 50 value obtained was 1.9 parts per million as compared with 150 and 25 ppm respectively found for resistant larvae of A. stphansi and A. sundaicus. He concludes that the Wellington *A. gambiae* while more tolerant to D.D.T. than most *A. gambiæ* elsewhere have not developed anything like a true resistance and after twelve years of exposure to D.D.T. have probably gone as far in the direction of resistance as they are likely to go.

65. Comparison in the Lagos Laboratory of the Nigerian Federal Malaria Department of the Wellington *A. gambiæ* with samples of known susceptible and resistant mosquitoes from different places in Nigeria, showed that those from Wellington resembled resistant population from three towns in Northern Nigeria more than a uniformly susceptible population from Lagos Mr. Elliott therefore concluded that—

> " At all three of these Northern Nigerian towns the hereditary factor conferring resistance to Dilldrin and B.H.C. is known to be present, not only on the basis of larval tests, but on the results obtained by a number of independent observers using the conventional and accepted method of testing adult mosquitoes. The conclusion is therefore irresistible that the same type of resistance has begun to appear at Freetown.
>
> As the use of B.H.C. as an imagicide goes on, the *A. gambiæ* population is likely to become increasingly resistant to the toxicant as the new genetic factor increases its representation in the population, and the results of the control will correspondingly deteriorate. The concurrent use of D.D.T. larvaciding has probably helped to conceal the effects of the change, and will continue to do so, so that a sudden increase of density, longevity and vectorial capacity, with marked epidemiological changes, is unlikely to occur. But some increase in density has already been reported, and more may be expected in future seasons so that a change of toxicant is indicated as soon as supply arrangements allow. As with the other schemes where this type of resistance has appeared (Kpain, Liberia, Bobo-Dioluasso, Upper Volta, and Western Sokoto) the choice of insecticide to replace B.H.C. or Dieldrin seems to be limited to D.D.T."

66. No changes have yet been made in the methods of mosquitoes control employed. Considerable reliance is still placed on residual spraying particularly in the sub-urban and rural areas. Houses in these areas are treated quarterly with B.H.C. but in view of the Elliott's report a change in methods must be considered.

Onchoceriasis:

67. Surveys in 1955 to 1956 made by Dr. D. J. Lewis and Dr. O. F. Conran for the Sierra Leone Development Company in the Tonkolili valley showed a very heavy infestation with Simulium and a high incidence of onchocerciasis within the Company's mining concession in the valley. During the year Dr. Crisp has joined the Company in Sierra Leone as Entomologist and is working to control Simulium in the concession. The Government Medical Entomologist has co-operated with Dr. Crisp and has started an investigation into the distribution of Simulium damnosum in the Provinces. It is known that both disease and vector are wide-spread but the disease does not as elsewhere, appear to be associated with a high incidence of blindness.

Guinea Worm:

68. Nine cases of Guinea Worm were treated at the Connaught Hospital Freetown. These all appear to have been in Nigerians recently arrived in Sierra Leone. No local source of infection has come to light from enquiries that have been made.

Yellow Fever and Virus Diseases:

69. Mr. J. P. T. Boorman, Scientific Officer (Entomologist) and Mr. V. A. Clarke, Laboratory Technologist of the West African Council for Medical Research visited Sierra Leone from April 23rd to June 12th to investigate fevers of possible viral origin, survey human and monkey sera, and make an entomological survey of the areas visited. This visit was arranged because the immunity state of the population needs to be known in order to determine the need for and to plan policy for vaccination against yellow fever, now that safe and stable dry vaccines are becoming available, and to find if possible what was the cause of cases of encephalomyelitis reported at Segbwema in 1955–1956.

70. The towns visited during the tour included Kenema, Segbwema, Kabala, Kamakwie, Rokupr, Port Loko, Magburaka and Farangbaia. At each of these places, numerous sera were collected for routine survey purposes. Patients attending hospitals and dispensaries who were suspected to be suffering from virus diseases were bled and the sera inoculated into mice for possible virus isolation; but in no case was virus isolated.

71. A number of monkeys were shot, including the White-Tailed Colobus, the Red Colobus, the Mona Monkey, the Putty-nose Guenon and the Sooty Mangabey. Monkeys are a serious pest in Sierra Leone, especially in the East; they are not killed for food as in Nigeria.

72. Mosquitoes were scarce at this time, the rains not having started, but the common Stegomyia's were found to be widely distributed Of great interest was the record of larvae of *Aedes* (*Stegomyia*) *psuedoafricanus* from a tree hole at Kenema. This is probably the first record from Sierra Leone and one of the few records of this species from an inland locality.

73. Yellow Fever sera protection tests were completed on nearly all the sera collected and results are shown in Tables in Appendix V. These tables indicate immunity in human sera of children between 5–9 and substantial number between 10–15 around Kabala where an outbreak of Yellow Fever was diagnosed in 1949–1950 with one proved fatal case. The general immunity rate suggests that yellow fever vaccination would be desirable.

74. Each of the four species of monkey examined had specimens showing positive probation tests.

Smallpox:

75. The whole country has remained infected throughout the year. Following the incidents described in paragraphs 23–26 above there was a most severe outbreak, and in the circumstances it is not suprising that it remained uncontrolled. It was particularly bad in the first quarter of the year, and all reports indicate that the source of the epidemic was the Kono District. One factor in its spread was the complete ignorance of local people of the dangers of infection, as people sick with obvious smallpox were regularly carried on lorries as passengers back to their homes from diamond areas. Many smallpox cases were stopped in lorries at Bo where a large camp was opened, and many also were stopped at Waterloo when attempting to come to Freetown. One factor in the spread of infection was undoubtedly the great increase in Motor Traffic and increased speed of movement with replacement of ferries by bridges. The numerous ferries on Sierra Leone roads formerly made excellent sanitary posts. Over 4,700 cases were notified during the year, 4,000 of these being notified in the first six months of the year, and nearly half of them in the first quarter.

76. The repetition of events during the year, with re-establishment of diggers in previously evacuated villages, and their subsequent dispersal by Police action again gave rise to anxiety, the Senior Medical Officer (Health) on one visit to Yomandu, one of the worst and most notorious places, saw a case of infectious smallpox in the street. However, nothing like the explosive outbreak of 1956 and early 1957 has occurred. During the worst of the epidemic it was found in many places that unscrupulous people were practising inoculation for profit. The Medical Officer, Port Loko reported:—

> " This year, the duration and intensity of smallpox seems to have been rather greater than in recent years. As mentioned above, additional vaccinators were employed to combat the spread, but it is regrettably true that the public's co-operation is not sufficiently gratifying. It was also discovered on quite a few occasions that some of the people have been practising inoculation with serum from actual smallpox cases and with obvious results."

The Medical Officer, Makeni reported:—

> "One main factor which I believe is responsible for the persistent small outbreaks of the disease in this district is due to the ignorant action of the so-called native healers who still carry the virus preserved in one form or another going about the country offering " Medicine " which they proclaim could afford immunity against the disease to persons so treated. I describe the action of one of these who unfortunately we cannot lay hand on owing to the un-co-operative attitude of the Section Chief. At one time it was thought that the district had been rid of this disease but on the 11th of November there was report of an outbreak of this disease in a village called Tambiama eleven miles away from Makeni. I personally investigated this and visited the town on three occasions. It was discovered that the outbreak was due to the fact that a native woman had been going round the area offering people immunity against the disease.
>
> From reports gathered on the spot it transpired that this woman had collected scabs from people who had suffered and recovered from the disease. These scabs were powdered and mixed with clay and powdered leaves of certain plants. It is this mixture that this woman went about with scratching the arms of people and rubbing it into the wounds so made. In most cases that I saw as a result of this the reaction was most typical. There were five severe cases of smallpox seen and a mass vaccination campaign was carried out by the Health Inspectors and myself."

It was said also that inoculation was being practised in Moyamba District.

77. Vaccination is accepted in towns and by educated people but in different chiefdoms the success of a campaign of vaccination depends very greatly upon the support and authority of the Paramount Chief or Section Chief. In some chiefdoms vaccinators and Health Inspectors were chased out of villages and sometimes beaten up on the instructions of reactionary chiefs. In two places the Chiefs concerned died later from smallpox and the people then accepted and welcomed vaccination.

78. Typical of the work that was done to control the epidemic are the following reports:—

(1) From the Medical Officer, Kabala:—

> " There was an outbreak of smallpox which started in January and spread through to early August. The disease attained its maximum in April when twenty-five cases were admitted into hospital. The whole

of Koinadugu District was affected and on several occasions I have had to go on walking treks to avoid transportation of the victims and to avoid spread of the disease as much as possible.

Isolation methods and routine treatment of Sulphonamides, lotio calamine applications, A.P.C. tablets and Potassium Permanganate baths were instituted.

Extensive vaccinations were carried out and six temporary vaccinators were locally employed apart from the Health Inspector, Dispensers and two Health Inspectors-in-Training sent from Bo. The disease was eventually controlled (either by Medical effect or natural processes) in August."

(2) From the Medical Officer, Lungi:—

" Three years ago, there was a mass vaccination campaign in the whole of the Kaffu Bullom Chiefdom. Furthermore, the Health Inspector based in Lungi, carried out vaccination in the nearby villages on days when there were no international flights. This may account for the fact during the epidemic the residents in the airport area, were not affected, except the wife of one member of the staff of the Civil Aviation Department. It would appear too that in the villages the majority of the people affected were " strangers ". These were one time inhabitants of the Kaffu Bullom Chiefdom, who during the diamond rush migrated to the diamond areas.

These people returned to their chiefdom during the expulsion of " strangers " from the diamond area either with the disease already contracted or unvaccinated. During this period, mass vaccination was carried out in the various villages by the Medical Officer and his team and shimbecks were built in several villages in which patients were isolated and given treatment."

(3) From Health Development Officer, South-western Province:—

" Much of the year was dominated by the smallpox outbreak and the work involved in checking it. Up to July, twenty assistant vaccinators plus all thirty-six Health Inspectors-in-Training were constantly being posted to deal with reported outbreaks. After July the Health Inspector-in-Training and normal staff carried on when the assistant vaccinators were terminated. The general campaign consisted of four parts:—

(i) Immediate action in areas where cases were reported. This consisted in isolating cases in shimbecks or removing them to Bo Isolation Camp if it was possible and then intensive vaccinations in the infected villages and villages immediately surrounding.

(ii) A routine village by village vaccination campaign through the chiefdoms.

(iii) A mobile cinema campaign showing the film " smallpox " and various coloured slides of actual cases plus talks in the vernacular. This produced a good response in all the towns visited and the accompanying vaccination teams were equipped with lights and often continued vaccination late into the night. Most of the principal towns in the provinces on motorable roads were covered by this campaign and several towns along the railway line.

(iv) Bo Town was regarded as the cross roads of the Protectorate and for most of the early part of the year all vehicles passing through Bo were stopped and unvaccinated persons were vaccinated on the spot. This explains the very high vaccination figures of Bo Town itself. Many of the cases treated in the Bo Isolation Camp were found on lorries.

Apart from improvised isolated huts made in towns where outbreaks occurred a semi-permanent isolation hospital was built on the outskirts of Bo along the Tikonko Road. The buildings were of stick with palm sides and " pan " roofs, there were three sixteen bed wards, a nurses' room, a mortuary, latrine and a Uniport hut for convalescents. It was staffed twenty-four hours a day and was under the control of the Senior Nursing Sister. 341 cases were nursed in this isolation hospital during 1957.

A similar but smaller smallpox isolation hospital was made in Moyamba hospital compound consisting of a male ward and female ward of pan and stick, and latrines."

79. The recorded total vaccinations performed during the year was 835,644.

Influenza:

80. Influenza was first notified during 1957 in the week ending 7th September. There was a sudden outbreak with 97 notifications in Freetown and 77 notifications elsewhere in this first week. The disease, as has been recorded elsewhere was first diagnosed among school children, and conicidentally with the first outbreak at Freetown were reports of school-outbreaks in places as widely separated as Makeni and Kabala. By the end of September, 4,362 cases had been notified in Freetown, and 4,325 elsewhere. Notifications fell rapidly in October, and after November there were only four notifications; the total number of notified cases being 5,434 in Freetown and 5,244 elsewhere.

.....The mortality from the disease appears to have been very small or negligible. In Freetown rather more deaths were registered in September than in any other month,.....but this does not appear to have been greater than the usual seasonal increase of mortality during the rains. Symptoms were very similar to those described in other epidemics.

Gonorrhoea:

81. Gonorrhœa remains an extremely common disease, and with increasing population movement is possibly becoming more common. It leads to a very great amount of chronic ill health and is, second to malaria, and together with chronic skin ulcers, the most commonly treated disease in hospitals. The numbers treated rose to a maximum of 10,500 out-patients and 160 in-patients in 1956. In 1957 they have declined somewhat to 9,200 out-patients and 150 in-patients and there has been a considerable decline in numbers treated in the three hospitals affected by the yaws-penicillin campaign at Kabala, Port Loko and Makeni. In these three hospitals out-patients cases of gonorrhœal infection treated in the past three years have been as follows:—

1955	..	..	..	..	2,117
1956	..	..	..	..	2,385
1957	..	..	..	..	1,282

82. There is no hope that this campaign by itself can do anything to reduce permanently the amount of infection with gonorrhoea. Even though penicillin is a specific for the disease and has been universally administered, there is almost immediate re-introduction of the disease and a pool of infection is again established. This is illustrated by reports from Medical Officers. The Medical Officer, Kabala reports that attendance by males is the rule and by females the exception. Hence the latter are a constant source of re-infection. There is occasionally failure to respond to treatment due to persistent re-infection, failure to take treatment as directed, and chronicity, and in these cases attempts made to persuade patients to bring re-infecting patients often proved futile due to shyness. It is very rare for females to report unless there are complaints such as salpingitis or arthritis.

83. The Medical Officer, Koidu says that gonorrhœa is very prevalent some of the worst affected being policemen and Public Works Department Labourers, and that it is certainly a factor which leads to loss of man power. The Medical Officer, Kailahun refers to its very high incidence saying that it is not surprising with prevailing socio-economic conditions.

84. The Medical Officer, Kabala, refers also to the misuse of penicillin for gonorrhœa, given illicitly in inadequate dosage. There is little doubt that whereas formerly yaws was the cause of the demand for injections, the chief cause for the demand now is for penicillin for gonorrhœa.

85. The Medical Officer, Makeni refers to the poor attendance at Batkanu dispensary, the main reason being, he was told, that "*The Dispenser nor de gee chuke.*" (The Dispenser does not give injection). He will in future give injections as part of the yaws campaign, but to deal efficiently with gonorrhœa require a considerable increase in female medical staff, and separate clinic accommodation for women. It is clear that gonorrhœal infection are the cause of enormous amount of misery, inefficiency and premature death and that present resources are not dealing effectively with the problem.

Accidents:

86. Previous annual reports have noticed the increase of accidents due to transport and motor vehicles. The numbers treated continue to increase as shown by the following table of hospital in-patient and out-patient admissions.

	1952	1953	1954	1955	1956	1957
Motor Vehicle Accidents ..	463	862	1,104	1,657	3,318	3,476
Other transport accidents ..	113	562	515	669	798	1,860
Total	576	1,424	1,619	2,326	4,116	5,336

It is probable that some motor vehicle accidents are wrongly attributed to other transport accidents.

87. Firearms continue to cause a number of accidents in the hospitals in the Northern half of the country, presumably because this is more open land, with more opportunities for shooting by native hunters than the more heavily wooded land to the South. The injuries are usually caused by the bursting of unreliable guns, and often cause nearly total destruction of a hand.

A similar distribution of this kind of injuries has been repeated for some years. This year no cases were reported from Connaught Hospital, Bo or Moyamba, but other hospitals reported as follows:—

	In-patients	*Out-patients*
North:		
Port Loko	8	5
Magburaka	7	9
Makeni	8	20
Kabala	14	36
Koidu	5	15
	42	85
South:		
Bonthe	1	19
Pujehun	2	2
Lungi	0	1
Kenema	3	4
Kailahun	2	4
	8	30

V.—HOSPITALS, CLINICS AND CURATIVE SERVICES

88. Total attendances and admissions in most hospitals continue to increase, as will be seen from part II of this report. The newly opened hospitals have further contributed to the increase. The numbers of out-patients attending hospitals now greatly exceeds the accommodation for them in all hospitals, particularly in Freetown hospitals. In the Freetown hospitals, in-patients are 1,000 above the mean of the previous three years, new out-patients have increased by 24,000 and total out-patient attendances by 33,000. In the provinces there was an increase of 4,000 in-patients over the mean of three years 1954–1956, 34,000 new out-patients and 100,000 total attendances.

89. A notable increase of work occurred at Kailahun hospital, one of the smallest and most inadequate of the district hospitals. It is upon one of the main routes across the international border along which trade has so greatly increased as a result of the diamond boom.

90. In the years 1951–1955 inclusive, the mean total out-patient attendances was 20,970 with 488 in-patients. Up to 1952 practically no confinements had taken place at the hospital, and there was an average of 28 confinements per year for 1953 to 1955 inclusive. Over the past three years the Medical Officer has returned statistics as follows:—

STATISTICS

	1955	1956	1957
Total attendances	28,715	50,092	73,947
,, New cases	5,120	7,717	9,374
,, In-patients	390	580	725
,, operations	146	220	322
,, deliveries	33	167	207

Maternity and Infant Welfare:	1955	1956	1957
Number Admitted	41	179	242
,, deliveries	33	167	207
,, prematures	7	26	7
,, abortions	14	6	9
,, of still-births ..	1	16	1
,, of Neo-natal deaths ..	2	13	—
,, of maternal deaths ..	—	3	1

The Medical Officer reported in 1950:—

> " The necessity for a bigger building becomes more and more acute. There are only 12 male and 6 female beds proper—and four more beds for isolation cases. An old building—the former Post Office—has been made into an overflow ward, but this is not at all satisfactory particularly as this building is badly in need of repairs. Public Works Department has been approached about this long ago, without any effect, however."

In 1951 the Medical Officer reported:—

> " The days when we had to exercise all our persuasive powers to convince people to stay in hospitals seem to be gone. These days we seem to spend most of the time trying to convince people that their particular complaint does not need hospitalisation. The situation has been made worse by the closing down of the old Public Works Department building which had been used as an overflow ward for a few years."

In 1952 the Medical Officer reported:—

> "Many women now are attending to have their babies in hospital which throws a considerable strain on the bed position. In many cases it was necessary to discharge them before the recognised separation of the cord, in order to admit new cases."

91. The hospital at present remains as described in 1950, without a temporary building that was in use there. A small extension of one ward is proposed but this is all than can be managed at present.

92. The same problems occur at the other old hospitals, of which were originally designed for about twenty beds.

The Medical Officer, Makeni reports of Makeni Hospital:—

> " The buildings are very old and to say the least have been very badly maintained in the past. Accommodation is grossly inadequate for the number of people attending there for medical treatment. The population of Makeni alone and its neighbouring towns and villages is large enough to deserve sympathetic consideration for an extension.
> " The delapidated hut in the hospital compound which was being used as a Maternity Ward was to say the least, a disgrace. This has lately been moved to the temporary Health Office building. The estimated cost of the repair on the building of the health office was £70. This has improved matters a little. The dispensary is small and there is no storage accommodation worth speaking of. The result of this shortcomings is that the hospital equipment are not adequately stored and hence deteriorate rapidly. The Out-patients' accommodation is grossly inadequate for the number of people attending the hospital daily. It is quite a common and most pitiable sight to see patients sitting outside in the sun and on every available shaded space waiting to be attended. This of course hinders the movement of the hospital staff in the course of their duty. The wards are in the main very dirty and difficult to keep clean in order to be brought up to hospital standard. The reasons are:—
>
> (i) They are inadequate, and consequently overcrowded.
>
> (ii) The stench coming from the bucket latrine adjacent to the wards is a constant source of nuisance.

(iii) The conspicuous absence of sluice rooms is another source of nuisance, dirty and soiled linen have to be kept in the already inadequate storage clean linen cupboard in the wards."

93. Makeni hospital has 28 beds including the five obstetrics beds in the old sanitary office referred to above. It has not changed since it was opened in 1929, when it was described in the Annual Medical Report as " The new Protectorate type hospital ..... much appreciated by the people of the district." Before the war, the hospital treated some 200–300 out-patients per year and 4,000 out-patients with 20,000–30,000 total attendances. This year 926 in-patients were admitted 11,593 new out-patients with 43,000 total attendances. In addition and connection with the training of Village Maternity Assistants, Maternity and Child Welfare Clinic have been started under the management of a Health Sister with supervision from the Lady Medical Officer at Makeni. Following a promising start in 1956, there were during 1957, 1,006 new ante-natal cases with 2,958 total attendances at the ante-natal clinic, and 1,342 first attendances at the Infant Welfare Clinic and 5,466 total attendances. The small temporary obstetric ward of 5 beds dealt with some 170 pregnancies, 156 of which were " normal ".

94. It was originally supposed that the new hospital at Magburaka would replace this old hospital, which it was intended should be reduced to a dispensary. What has happened is that Magburaka in its first full year of operation has done rather more work than Makeni, in much better conditions, but has not relieved the load on this inadequate old hospital nor should one expect a new hospital twenty miles away from a flourishing centre like Makeni to do so.

95. The new and more spacious hospitals that have opened at Kenema, Magburaka and Lungi have quickly been filled to capacity, as soon as they have been staffed and ready to work; they have been working before they were ready.

96. Lungi Hospital was completed and opened on 23rd October, 1957 by the Ministerial Secretary to the Ministry of Health the Honourable M. Kallon. The Medical Officer reports:—

" The hospital which is only three months old, has already begun to make its presence felt. Patients from all the surrounding villages report daily at the out-patients clinic. Some from as far as nine miles away. The average new cases reporting in the Out-patients Clinic were about 700 a month. In-patients admission increased considerably towards the end of the year, particularly amongst male patients. There were occasions when convalescent cases had to be discharged to make room for emergency cases. All sections of the hospital were in active use by the end of the year, including the Operating Theatre, the Kitchen and the Laundry. The office block was also completed and functioning satisfactorily."

97. Koidu hospital, in the Kono District adjacent to the Sierra Leone Selection Trust diamond mines, is not yet fully complete but has been opened partially as a matter of urgency. The Medical Officer reports:—

" There has been a great demand for this hospital due to the great influx of people into this area, which is the main diamond mining area of this Colony. The sudden increase of population with the construction of boom towns sets its own problems quite distinct from the rest of the Protectorate. Up to the end of September the hospital was functioning practically as a dispensary, and in the transition from a smallpox camp to a fully functioning hospital has been a slow process. Serious cases were admitted to the Sierra Leone Selection Trust's hospital and only out-patients were seen here with an occasional maternity case or other detained for observation.

The whole aspect of the hospital had undergone a gradual change within the last quarter, till now we have three fully equipped wards adequately manned. The male side consists of 12 medical and 4 surgical beds. The female 10 beds for medical and surgical cases, and 4 beds in an adjoining room for children.

The Maternity ward has a trained midwife in charge, and has 10 beds in her department, there is an adequate labour room; and was functioning since the middle of January, 1958.

The public is well served, having all the facilities for maternity, midwifery and surgery. There is a dispenser and a staff nurse (arrived in January) and three male nurses, along with 5 male and 3 female ward attendants. I therefore feel that the hospital is doing an excellent bit of work and providing the district with much of its medical needs; also since October, there have been no more in-patients who were our responsibility, detained in the Sierra Leone Selection Trust hospital. Also the entire government staff are now treated at the government hospital, and not as was previously the case. With the Police and senior government officials at the Sierra Leone Selection Trust's hospital."

98. At Kenema which was opened in 1956, the Medical Officer reports:— " The number of beds, in the hospital was not adequate to accommodate all cases requiring admissions. There were several days when all available couches and trolleys were occupied by patients who could not be turned away after having had to come from distant villages. One also has to resort to premature discharge of patients who had not yet fully recovered from their illness. With ever growing understanding among the local population the need for extension of the hospital becomes very urgent. A new separate Maternity Ward would greatly relieve the congestion.

99. In Freetown, the Maternity hospital and clinics were moved to the Princess Christian Maternity Hospital, where a new 30 bed-ward was opened, built under a Colonial Development and Welfare Scheme. At the Connaught Hospital, with the removal of the Welfare Clinics in the middle of the year to Princess Christian Maternity Hospital it was possible to make some start on the improvement of out-patient treatment, and two suites of rooms are now available for specialist clinics—eyes, gynaecology, surgery, and tuberculosis, and a new physician's consulting room. A new children's ward has been started in the old ante-natal ward, and the rest of the vacated accommodation will be for women and children, and also for the reception of major surgical casualties. The total increase of space is about 60 beds. One out-patient suite and the Physician's consulting room have been air conditioned, the main theatre has also been air-conditioned, greatly increasing the comfort of working conditions, and the sterility of the unit. The old children's ward has been converted into nurses staff rooms and cloak rooms.

100. At Bo hospital a small laboratory was constructed for the World Health Organisation Serologist and this will be taken over later as the hospital laboratory. An air-conditioner was installed in the Theatre. A lecture room and store were constructed, the old lecture room being made in the Surgical Specialist's consulting room.

101. At Lakka tuberculosis hospital work started on the reconditioning and reconstruction of the old buildings under Colonial Development and Welfare Scheme D 1994 and the new Infectious Diseases Ward was opened for smallpox cases, it has 16 beds. Work has yet to start on the provision of staff quarters, but the electricity generating plant was installed. During the year a Colonial Development and Welfare Scheme for provision of diagnostic X-ray apparatus for Lakka and Connaught hospitals was approved.

Dispensaries and Health Centres:

102. Of the 22 Health Centres provided for in the original Colonial Development and Welfare Act, all are completed except York Health Centre. In 1954 all dispensaries and Health Centres were handed over to the Administration of District Councils. Following the recommendations of the Commission of Inquiry into the Tax Disturbances in the Protectorate, the Medical Department resumed control of the dispensary and maternity services in all dispensaries and health centres at the beginning of 1957. The ownership and upkeep of the health centre buildings will remain with the District Council. These changes have had inevitably bad effects upon discipline and good administration and the department was faced at the start of the year with very large travelling claims sent in by dispensers who under the district Councils had been authorised to travel from village to village without regard to expense. These services are in urgent need of adequate supervisory medical staff; a start has been made with one Lady Medical Officer who supervises maternity services but more is needed.

103. The cases treated at dispensaries and health centres increased in the South-eastern Province but were less in the South-western Province and Northern Province. The reduction in the Northern Province is largely due to the conversion of Magburaka from a dispensary to a hospital. The habit of moving about the country away from Health Centres, which has developed from District Council control, means that often the health centre is left in charge of an untrained interpreter or labourer who carries out treatments as best he can. It is hoped that by incorporating Health Centres and Dispensaries into large field campaign against yaws and leprosy and the change in the type of training indicated in paragraph 18 will cause them to function more effectively.

104. In the Northern Province the Midwives Section of Health Centres has worked well under the supervision of the Lady Medical Officer and Health Sister. Village Maternity Assistants have been supervised and successful clinics started.

Voluntary and Charitable Institutions:

105. Government continued to give aid to approved mission hospitals, with capital grants-in-aid for new buildings, and recurrent grants towards annual running expenses. £14,400 was voted for these grants in 1957. A list of Mission and Mining hospitals is attached as Appendix III.

106. The Sierra Leone Branch of the British Red Cross Society have continued to supply milk to neccessitous children on medical prescriptions in Freetown, and have supplied wireless sets for patients at Lakka, Bo and Kenema hospitals. They have also arranged for the transport and accommodation of patients sent overseas for treatment.

107. The Police continued to train constables in First Aid for the St. John Ambulance Certificate. One prominent local firm is expected to form a uniformed corps of the brigade shortly.

108. Another voluntary society has started a successful and well managed nursery school in Freetown.

GENERAL

Important Visitors:

109. The following visitors from abroad visited the Medical Department during their stay in Sierra Leone:—

(i) Dr. G. Matthew Fyfe, C.B.E., M.B., F.R.C.P. (EDIN.) County M.O.H., Cupar-Fife, Scotland.

(ii) Mr. P. H. Newman, D.S.O., M.C., F.R.C.S., Orthopaedic Surgeon, Middlesex Hospital.

(iii) Mr. R. Elliott, Entomologist, Malaria Service, Yaba, Nigeria.

(iv) Dr. Wilson Jones, Assistant to Officer-in-Charge, Colonial Pesticide Research.

(v) Dr. W. J. Bell, T.B. Officer, T.B. Research Unit, West African Council for Medical Research, Ghana.

(vi) Mr. O. H. Morris, Head of Social Service Department, Colonial Office.

(vii) Dr. The Hon. W. S. Maclay, C.B., O.B.E., M.D., F.R.C.P., D.T.M., Adviser to the Ministry of Health.

(viii) Dr. J. Ross Innes, M.D., D.T.M., General Secretary, British Leprosy Relief Association.

Attendances at Conferences:

110. Dr. T. P. Eddy, Director of Medical Services attended the Annual meeting of the West African Council for Medical Research and the eighth Conference of Directors of Medical Services, West Africa, at Lagos, Nigeria in February.

111. Dr. M. C. F. Easmon, Temporary Medical Officer also attended this meeting of the West African Council for Medical Research.

112. Dr. H. M. S. Boardman, O.B.E., attended the Seventh Session of the Regional Committee of the World Health Organisation for Africa at Brazzaville, French Equatorial Africa in September.

113. Dr. D. E. Boye-Johnson, Senior Medical Officer of Health attended the Seminar of Health Education organised by the Regional Office for Africa of the World Health Organisation in co-operation with the French Government at Dakar, French West Africa in March.

114. Mr. T. O. Thomas, B.SC. (London), Medical Entomologist attended a conference organised by World Health Organisation at Brazzaville on Malaria Control in West Africa in November.

Legislation:

115. The following were enacted during the year:—

(i) Public Notice No. 22/1957—The Public Health (Protectorate) Ordinance—Cap. 191.

(ii) „ „ No. 35/1957—The Dog Ordinance Cap. 67.

(iii) „ „ No. 103/1957—The Public Health (Protectorate) Ordinance—Cap. 191.

(iv) „ „ No. 176/1957—The Public Health (Protectorate Ordinance—Cap. 191.

(v) „ „ No. 193/1957—The Public Health (Protectorate) Ordinance—Cap. 191.

Literary Contribution:

116. Dr. T. P. Eddy, C.B.E., M.R.C.S., L.R.C.P., D.P.H., Director of Medical Services, Sierra Leone submitted a paper on "Tuberculin Testing in Sierra Leone," which was published in the *West African Medical Journal.*

117. Mr. T. C. E. Thomas, B.SC. (London), Medical Entomologist submitted a paper on "The incidence of Microfilarae of *Acanthoceilon emaperstans* in the Population of Sierra Leone."

118. Dr. A. S. Valentine, M.B., B.S., submitted a paper on the incidence of "Smallpox at Lungi Airport" which was published in the Guy's Hospital *Gazette.*

PART II

CONTENTS

PART II
STATISTICAL INFORMATION
I—ADMINISTRATION AND STAFF ESTABLISHMENT

1 Director
1 Deputy Director
1 Assistant Director
1 Administrative Secretary
1 Stock Verifier
1 Sub-Accountant

1 Senior Specialist

4 Specialists
1 Senior Medical Officer (Health)
2 Medical Officers (Health)
1 Senior Medical Officer

1 Matron
2 Senior Nursing Sisters
14 Nursing Sisters
3 Health Sisters
1 Supervisor of Midwifery
12 Senior Staff Nurses
22 Staff Nurses, Grade I
20 Staff Nurses, Grade II
194 Nurses and Midwives
220 Student Nurses and Student Midwives
1 Chief Surgical Assistant

1 Senior Pathologist
1 Pathologist
2 Laboratory Superintendents
1 Laboratory Assistant, Grade I

1 Chief Dispenser
3 Assistant Chief Dispensers
6 Senior Dispensers

6 Radiographers

6 Dental Officers

1 Keeper
1 Chief Attendant

3 Health Development Officers
1 Chief Health Superintendent
1 Entomologist
10 Health Superintendents
2 Registrars of Births and Deaths

1 Storekeeper and Inspecting Pharmacist
2 Assistant Storekeepers and Inspecting Pharmacists
5 Store Assistants, Grade I

2 Senior Attendants, Class I
15 Senior Attendants, Class II

1 Transport Foreman
1 Motor Mechanic

1 Assistant Stock Verifier
3 Hospital Secretaries
1 Chief Clerk
4 First Grade Clerks
49 Second and Third Grade Clerks

General

35 Medical Officers (including Lady Medical Officers)
3 Medical Officers Endemic Diseases Control Unit
2 Physiotherapists

Nursing

1 Senior Surgical Assistant
1 Surgical Assistant
30 Probationer Infectious Diseases Nurses
1 Linen Store Supervisor
1 Laundry Supervisor
1 Senior Health Visitor
1 Health Visitor, Grade I
3 Health Visitors, Grade II
9 Health Visitors, Grade III
1 Supervisor of Village Midwives

Laboratory

3 Laboratory Assistants, Grade II
5 Laboratory Assistants, Grade III
5 Laboratory Assistants-in-Training

Pharmaceutical

14 Dispensers, Grade I
18 Dispensers, Grade II and III

Radiological

Dental

2 Dental Mechanics

Mental

60 Senior Attendants and Attendants

Health

2 Medical Entomological Assistants
8 Health Superintendents-in-Training
4 Health Inspectors, Grade I
50 Health Inspectors, Grade II and III
38 Health Inspectors-in-Training

Medical Stores

4 Store Assistants, Grade II
9 Store Assistants, Grade III
6 Store Issuers

Endemic Diseases Control Unit

75 Attendants and Learners

Transport

3 Senior Drivers
51 Drivers

Miscellaneous

Stokers, Cooks, Porters, Ward Attendants, Messengers, Packers, Telephone Operators, Sewing Maids, Mosquito Spotters, Special Constables, Carpenters, etc.

2—FINANCE

Expenditure during the past three years:—

	1955	1956	1957
	£	£	£
Personal Emoluments	248,039	341,299	379,315
Other Charges	240,638	223,588	346,079
Total	488,677	564,887	725,394

In addition the following provision was made under the Colonial Development and Welfare Scheme for hospitals and clinics:—

	£
Protectorate Health Centres	16,270
Health Centres—Colony	10,000
New Hospital, Kenema	3,000
New Hospital, Koidu	8,400
New Hospital, Magburaka	1,621
Lungi Hospital	8,000
New Hospital, Kambia and Port Loko	5,823
Tuberculosis Hospital, Lakka	30,000
Extensions to Provincial and Princess Christian Mission Hospitals	20,000
Improvements to Kissy and Connaught Hospitals ..	10,000
Specialist equipment for Lakka Hospital	10,000
Leprosy survey and treatment	10,000
Maternity Ward extensions to Kambia, Kenema and Makeni Hospitals	5,000
Ophthalmic block at Magburaka Hospital	5,000

3—HOSPITAL SERVICES

A.—Government Hospital Beds

NUMBER AND CATEGORY OF BEDS

Name and Location of Hospital	*General*	*Obstetrical*	*Tuberculosis*	*Infectious*	*Mental*	*Remarks*
A. Colony:						
Connaught ..	173	—	—	2	—	+40 cots
Connaught Annexe ..	20	—	—	—	—	+ 3 ,,
Hill Station	34	—	—	—	—	+ 2 ,,
P.C.H. (Maternity) ..	—	63	—		—	+41 ,,
Murray Town ..	60*	—	—	—	—	
Lakka	—	—	50	16	—	
Kissy Mental ..	—	—	—	—	112	
King George V Memorial Home ..	64	—	—	10*	—	For the aged and indigent
Female Infirmary ..	32	—	—	—	—	
B. Protectorate						
Bo	78	13	13	42	—	+ 17 cots
Bo Annexe	6	—	—	—	—	
Bonthe	29	6	—	7	—	+ 4 ,,
Moyamba	19	3	—	10	—	+ 1 ,,
Pujehun	22	—	—	—	—	+ 2 ,,
Kailahun	27	—	—	—	—	+ 4 ,,
Makeni	23	5	—	—	—	+ 2 ,,
Port Loko	18	4	—	—	—	+ 4 ,,
Kabala	39	1	—	—	—	+ 4 ,,
Lungi	49†	—	—	—	—	
Kenema	32	—	—	—	—	
Magburaka	36	14	3	3	—	+10 ,,
Koidu	35	—	—	—	—	
	796	109	66	90	112	+134 ,,

* For Leprosy

† Seventeen beds in this Institution are reserved for emergency and in the event of an accident to Aircraft.

‡ For surgical convalescent cases.

B.—Attendances at Government Hospitals

Name of Institution	*In-patients*	*OUT-PATIENTS*		
		New Cases	*Subsequent Attendances*	*Total Attendances*
A. Colony:				
Connaught	3,091	43,583	86,689	130,272
Hill Station	654	2,052	5,018	7,070
Maternity	2,899	—	—	—
Cline Town	—	44,163	80,513	124,676
Total	6,644	89,798	172,220	262,018
B. Protectorate:				
Bo	3,081	31,383	87,185	118,568
Njala	—	6,243	6,634	12,877
Bonthe	978	10,157	8,638	18,795
Moyamba	644	9,824	34,448	44,272
Makeni	926	11,593	31,870	43,463
Pujehun	577	9,032	10,343	19,375
Kenema	1,412	20,746	24,581	45,327
Koidu	150	1,974	986	2,960
Kailahun	738	10,910	64,426	75,336
Port Loko	411	9,495	16,180	25,675
Kabala	621	9,148	8,810	17,958
Magburaka	1,049	13,141	19,002	32,143
Lungi	60	6,001	9,454	15,455
Total	10,647	149,647	322,557	472,204
Colony Hospitals	6,644	89,798	172,220	262,018
Protectorate Hospitals	10,647	149,647	322,557	472,204
GRAND TOTAL ..	17,291	239,445	494,777	734,222

C.—Mean Annual Hospital Attendances during Triennial Period from 1948 to 1956

Including Cline Town and Maternity Home	*In-patients*	*OUT-PATIENTS*		
		New Cases	*Subsequent Attendances*	*Total Attendances*
A. Colony:				
1948–1950	4,908	56,888	184,875	241,763
1951–1953	4,890	54,741	188,530	243,271
1954–1956	5,709	65,480	163,744	229,224
B. Protectorate:				
1948–1950	3,973	67,336	183,271	284,273
1951–1953	4,694	106,283	189,660	295,943
1954–1956	6,821	115,836	253,991	369,827

C.—Mean Annual Hospital Attendances during Triennial Periods

	IN-PATIENTS	*OUT-PATIENTS*		
	Admissions	*New Cases*	*Subsequent Attendances*	*Total Attendances*
1929–1931:				
Total Colony and Protectorate ..	4,739	94,443	204,777	299,220
1933–1935:				
Colony	3,493	45,431	—	—
Protectorate	1,892	50,102	—	—
Total	5,385	95,533	318,920	414,453

1936–1938:				
Colony	3,991	53,779	—	—
Protectorate	1,701	62,350	—	—
Total	5,692	116,129	344,325	460,454
WAR YEARS OMITTED				
1948–1950:				
Colony	4,908	56,888	184,875	241,763
Protectorate	3,973	67,336	183,271	284,273
Total	8,881	124,224	368,146	526,036
1951–1953:				
Colony	4,890	54,741	188,530	243,271
Protectorate	4,694	106,283	189,660	295,943
Total	9,584	161024	378,190	539,214
1954–1956:				
Colony	5,709	65,480	163,744	229,224
Protectorate	6,821	115,836	253,991	369,827
Total	12,530	181,316	427,735	599,051

D.—Yaws and Chronic Ulcer of the Skin diagnosed in all Hospitals 1949–1957

	YAWS		*ULCER*	
	In-Patients	Out-Patients	In-Patients	Out-Patients
	Admissions	*New Cases*	*Admissions*	*New Cases*
1949	38	7,361	—	—
1950	40	11,539	—	—
1952	39	8,216	283	6,596
1953	35	7,956	306	6,355
1954	23	9,395	267	9,041
1955	20	8,608	293	10,792
1956	19	7,791	207	11,025
1957	2	3,902	239	9,061

E.—Maternity and Child Welfare Services

Bed accomodation and attendances are included under A. & B. above.

Freetown Maternity Home:

In Freetown, out of a total 2,167 deliveries there were 1,737 normal cases and 430 abnormalities.

Ninety-two of the total of 2,167 deliveries were twin deliveries 2,232 babies were born of which 180 were described as premature including 26 sets of twins.

Twenty still-births and twelve post-natal deaths occurred in the 180 premature infants.

There were 20 maternal deaths.

Fifty blood transfusions were given. At Waterloo one of the two Colony Health Centres, sixty-two deliveries were recorded.

In the Provincial hospitals 1,615 women were admitted to the maternity wards. A total of 1,327 deliveries were recorded, 506 which were at Bo hospital.

In the Provincial Health Centres 598 deliveries were recorded.

Domiciliary Midwifery Service:

There were 113 bookings as compared with 181 in 1956. Forty-six patients were delivered at home and nineteen were admitted to the Maternity Hospital for complications and forty-eight made other arrangements for their confinement.

Maternity and Child Welfare Clinics:

ATTENDANCES AT FREETOWN CLINICS

	New Cases			*Subsequent Attendances*		
	1955	1956	1957	1955	1956	1957
Ante-natal and Post natal clinics ..	8,430	6,550	8,310	21,242	16,111	17,413
Gænycological V.D. Clinic ..	425	665	190	3,788	3,192	2,042
Infant Welfare Clinic	2,976	4,629	3,178	9,164	14,064	18,218
BO HOSPITAL						
Ante-natal Clinic	942	1,356	1,825	4,019	5,321	5,755
Infant Welfare Clinic	801	977	1,514	3,958	4,120	4,268

School Medical Services:

The schools' clinics were held during the year both in this Department and at the St. Joseph's Convent. Attendances at the clinics run by this department was moderate as compared with previous years except that it became quite heavy in September and October when there was an epidemic of Asian Flu. As many as 894 children were seen during this period and quite a few who showed signs of complication were admitted to hospital for treatment.

A total of 4,183 were treated at the clinic run by this Department.

F.—MENTAL HOSPITAL

Numbers of patients admitted to the Kissy Mental Hospital during the year:—

Statistics relating to Patients	*Male*	*Female*	*Total*
Remaining in Hospital on the 31st December, 1956	144	59	203
Admitted in 1957	57	12	69
Discharged in 1957	31	7	38
Deaths in 1957	19	6	25
Remaining in Hospital on the 31st December, 1957	151	58	209

G.—ENTOMOLOGICAL LABORATORY

Full statistics are given in the Laboratory's report which is published half-yearly.

H.—PATHOLOGICAL LABORATORY

See Appendix I for examinations performed in the Laboratories in Freetown and Bo.

I.—X-RAY UNIT

The X-Ray Units in Freetown and Bo were in operation during the whole year. The following table records the number of examinations preformed in Freetown and Bo:—

	FREETOWN		
	1955	1956	1957
Total number of Patients examined	6,228	8,580	10,571
Fluoroscopic Examination	762	921	1,350
Radiographic Examination	12,979	14,189	15,891
Total Radiological Examinations	13,741	15,110	17,241

In Bo 2,303 patients were examined during the year as compared with 2,222 in 1956.

J.—Operating Theatre—Connaught Hospital

The following table records the number of major and minor operations performed in the Connaught Hospital Operating Theatre during the past five years:—

	Total	*Cured*	*Re-lieved*	*Un-relieved*	*Died*
1953	1,836	713	1,093	10	20
1954	3,836	2,335	1,465	10	26
1955	3,796	1,756	1,976	24	40
1956	4,004	1,979	1,950	53	22
1957	3,104	1,544	1,503	41	16

K.—Port Health

Freetown Port

One thousand and twenty-eight ships were boarded during the course of the year. A total of 86,598 vaccinations were performed at the Port Health Office. As a result of the outbreak of Smallpox the port of Freetown was declared infected under the International Sanitary Regulations and measures were imposed to ensure that all persons entering or leaving the port were in possession of valid vaccination certificate.

Ante-plague measures were carried out during the year and poisoned bait using "SOREXA" remained the main and effective form of rodent control. The dead and live rats caught were examined in the Pathological Laboratory and none was found to be plagued infected.

Freetown Airport—Lungi

As a result of the outbreak of Smallpox Lungi Airport was declared infected under the International Sanitary Regulations and measures to ensure that all persons leaving or entering the Airport were in possession of valid vaccination certificate were adopted. A number of vaccinations were performed during the year in and around the Airport.

During the year a Paterson Type Water Purification Plant was installed at the Reservoir for the cleansing of the Lungi water supply. Samples of water were sent weekly to the Laboratory in Freetown for analysis. Residual spraying in the Airport area was carried out quarterly by the Malaria Control Unit in Freetown.

L.—Dental Service

The figures given for treatment in Freetown are:—

	Total Attendances	*Fillings*	*Ex-tractions*	*Other Treatment*
1952	10,909	2,372	8,377	1,066
1953	7,789	1,192	6,120	389
1954	6,134	702	5,878	731
1955	8,574	1,219	5,031	2,324
1956	9,783	1,186	8,044	971
1957	8,916	384	3,206	875

The figures for treatment given in Bo are:—

1956	1,775	200	1,555	—
1957	3,226	236	1,788	224

M.—List of Dispensaries and Health Centres

A list of all dispensaries and health centres is attached in Appendix IV

N.—Attendances at Dispensaries and Health Centre

Area	*New Cases*	*Subsequent Attendances*	*Total Attendances*
Colony	33,460	65,102	98,562
South-western Province	45,826	60,961	106,787
South-eastern Province	25,045	26,904	51,949
Northern Province	33,124	66,737	99,861
Grand Total	137,455	219,704	357,159

4—ENDEMIC DISEASES CONTROL UNIT

29 cases of Sleeping Sickness were diagnosed and treated in the Centres during the year. These showed a decrease of 8 on the figure for 1956. Of these cases 16 came from the Kailahun Endemic area, 6 from Kenema district and 7 from Kono. The highest figure in any one town was recorded at Gandorhun in the Kono district.

II—Treatment Centre Returns

	S.S.	*Yaws*	*B'za*	*Dysentery Amoebic*	*Leprosy*	*Int. Dis.*	*Other Dis.*	*Total New Cases*	*Total Attendances*
South-eastern Province	28	822	1,847	1,339	147	6,685	232	63,408	117,428
Northern Province ..	1	28	2	48	98	161	1	2,935	7,201
Total ..	29	850	1,849	1,387	245	6,846	233	66,343	124,629

III—Yaws Campaign

The summary of the results for the first two years' work is shown below:—

	Children Examined	*Infect Yaws*	*Total Yaws*	*ADULTS Examined*	*Infec*	*Total Yaws*
I.T.S.N.P. 1956	92,225	?*	19,794	138,245	?*	30,766
I.T.S.N.P. 1957	33,956	824	2,504	37,510	56	4,828
I.T.S.S.E.P. 1957 ..	40,090	164	1,048	62,878	71	4,903
Pilot Survey 1957 ..	985	7	19	1,956	2	137
R.S.N.P. 1956–7 ..	66,556	1,149	3,317	101,950	345	5,714
Totals	233,812		26,682	342,539		46,348

	Total Treated	*Total Yaws*
I.T.S.N.P. 1956	230,470	50,560
I.T.S.N.P. 1957	81,466	7,332
I.T.S.S.E.P. 1957	80,560†	5,951
Pilot Survey, 1957	2,941	156
R.S.N.P. 1956–7	56,558*	9,031
Totals 1956–7	451,995	73,030

* Not recorded separately.

† Total mass treatment not done.

5—PUBLIC HEALTH

A.—Vital Statistics

TABLE I

BIRTHS AND DEATHS REGISTERED IN FREETOWN AND THE COLONY 1957

Live Births

	Male	*Female*	*Total*
Freetown	2,007	1,911	3,918
Rural Areas	797	808	1,605
Bonthe Sherbro	65	62	127
	2,869	2,781	5,650

Deaths

Freetown	1,230	964	2,194
Rural Areas	757	607	1,354
Bonthe Sherbro	91	95	196
	2,078	1,666	3,744

Births, Still-births and Infant Mortality in Freetown

Live Births	2,007	1,911	3,918
Still-births	117	92	209
Deaths under 1 year of age	315	238	553

TABLE II

Infant Mortality Rate

(Death under 1 year per 1,000 live births) .. 141.14

Still-birth rate, Still-birth per 1,000 births .. 50. 8

Freetown Infant Mortality Rates for the past Nine Years

1949	1950	1951	1952	1953	1954	1955	1956	1957
158	148	119	143	116	110	124.9	132.55	141.14

TABLE III

Rural Areas—Colony:

In the Rural Areas of the Colony the recorded registrations of births and Infant deaths are:—

	Male	*Female*	*Total*
Live Births	797	808	1,605
Deaths under 12 months	154	129	283

In Sherbro Judicial District, the recorded registrations of births and Infant deaths are:—

	Male	*Female*	*Total*
Live Births	65	62	127
InfantMortality rate.....228.5	—	—	—
Deaths under 12 months	11	18	29

The three sub-urban registration districts of Kissy, Wilberforce and Murray Town are adjacent to Freetown and practically a part of the City. More comprehensive figures for Freetown are therefore:—

Freetown Registration Area:

	Live Births	*Deaths under 1 year*	*Infant Mortality Rate*
1956—Sub-urban Villages	3,923	520	
Freetown	473	95	
Total	4,396	615	150 per 1,000
1957—Sub-urban Villages	3,918	553	
Freetown	424	109	
Total	4,342	662	152 per 1,000

Table IV

Live Births, Infant Deaths for 1,000 Live Births of Racial Groups, Registered in Freetown

Race or Group	1956 *Live Births*	1956 *Deaths Under 1 year*	1956 *Infant Mortality Rate*	1957 *Live Births*	1957 *Deaths Under 1 year*	1957 *Infant Mortality Rate*
Creoles	885	92	104	960	81	84
Sierra Leone Tribal Group ..	2,822	428	152	2,751	466	169
Syrians, Lebanese and Indians ..	95	6	63	97	4	41
Europeans and Americans ..	47	3	64	55	1	18
Other West Africans and West Indians (Nigerians etc.) ..	74	1	14	55	1	18
	3,923	520	133	3,918	553	141

B.—Infectious Diseases Notifications

	Cases	*Deaths*
Cholera	—	—
Plague	—	—
Smallpox	4,846	228
Typhus (Murine)	—	—
Yellow Fever	—	—
Cerebro-Spinal Meningitis	104	14
Dysentery	3,071	23
Influenza	10,678	4
Pneumonia	1,727	73
Poliomyelitis	4	—
Relasping Fever	—	—
Sleeping Sickness	41	—
Enteric Fever	35	—
Chicken Pox	255	—

C.—Vaccinations

The following vaccinations were performed during the year:—

Smallpox	835,644
Yellow Fever	3,758

APPENDIX I

PATHOLOGICAL LABORATORY

Examinations Performed in the Freetown Laboratory

BLOOD FILMS			5,188
	Africans	*Europeans*	
Total	5,131	57	
P. Falc.	544	5	
FAECES			2,829
Africans	2,598		
Europeans	231		
	Africans	*Europeans*	
Taenie	21	2	
Ascaris	342	1	
Ankylostomes	125	1	
Strongyloides	140	—	
Trichuris	65	1	
Ent. Histolytica (vegetative)	66	1	
Ent. Histolytica (Cysts)	6	—	
Giardia	3	—	
Ent. Coln	2	1	
Iod. Butsclii	2	—	
Trichomonas	37	1	
Sc. Mansoni	—	—	
Blood	256	13	
Pus	354	17	
Mucus	172	12	
Occult blood	12	1	
Oxyuris	4	1	
Balantidium Coli	—	—	
URINE			3,634
Africans	3,365		
Europeans	269		
	Africans	*Europeans*	
Albumen	1,223	44	
Sugar	131	4	
Acetone	31	1	
Trichomonas	25	—	
Sch. Haematobium	51	—	
Red blood cells	123	1	
Casts	30	—	
Pus	2,184	1	
Bile pigments	14	1	
Bile salts	3	—	
Coliforn-Bacilli	25	1	
S. albus	2	—	
Spermatozoa	2	—	
SPUTUM			3,742
	Africans	*Europeans*	
Total number	3,717	25	
Sputum positive	215	1	
VENEREAL DISEASES			206
Africans	193		
Europeans	13		
	Africans	*Europeans*	
Urethral smears	116	2	
N. Gonoccoccus+ve	14	2	
Vaginal and Cervical smears	70	6	
N. Gonoccoccus+ve	4	—	
Trichomonas	4	—	
Eye smears	5	—	
N. Gonoccoccus+ve	—	—	
D.G.I.	2	5	
T. Pallidum+ve	1	—	

SEROLOGICAL KAHN TESTS							6,721
Africans	6,647						
Europeans	74						
				Africans	*Europeans*		
Strong Positives				1,265	—		
Positives				1,046	1		
Doubtful Positives				289	—		
LAUGHLEN TESTS							6,794
AGGLUTINATION							247
				Africans	*Europeans*		
				228	19		
TITRE OVER 1 : 25							
				Africans	*Europeans*		
S. typhi H.				43	13		
S. typhi O.				18	1		
S. paratyphi A.				12	11		
S. paratyphi B.				9	9		
S. paratyphi C.				—	—		
S. enteritidis				5	1		
Salmonella group				22	10		
B. PROTEUS							
X 19				9	—		
X 2				10	—		
XK				—	—		
ERTHROCYTE SEDIMENTATION RATE							1,812
				Africans	*Europeans*		
				1,702	110		
HAEMATOLOGY							4,340
			Total	*Europeans*	*Africans*		
Red Cell Count			315	22	293		
Haemoglobin			3,508	204	3,304		
Packed cell volume			2,001	156	2,745		
White cell count			918	120	798		
Differential count			602	70	532		
TEST FOR SICKLE CELLS							240
Negative					181		
One plus					2		
Two plus					20		
Three plus					37		
HAEMOGLOBIN							3,508
	Total	*Over 12 gms.*	*10–12 gms*	*7–10 gms.*	*Under 7 gms.*		
Africans	3,304	901	1,146	908	349		
Europeans	204	139	43	19	3		
BACTERIOLOGY							1,263
				Africans	*Europeans*		
				1,149	114		
Faeces				*Africans*	*Europeans*		
S. typhi				—	—		
S. flexneri W.				30	2		
S. flexneri Z.				7	—		
S. flexneri VZ				24	1		
Sh. Sonnei				3	2		
Sh. schmitzi				6	—		
Sh. Newcastle				1	2		
Sh. flexneri 103				3	—		
Sh. shigae				1	—		
S. enteritidis				3	—		
Trichomonas				1	—		
Urines							
B. coli				83	11		
S. haem				—	—		
B. proteus				3	—		
S. albus				37	5		
S. saphrophyticus				6	2		

Vaginal and Cervical swabs	*Africans*	*Europeans*
B. coli	15	4
S. albus	12	2
N. gonococcus	—	—
S. Saphrophyticus	5	—
B. pyocyaneus	1	—
M. albicans	3	—

Throat and nose swabs	*Africans*	*Europeans*
S. albus	1	—
S. aureus pyogenes	2	1
Strep. Haemolytic	2	—
B coli	—	—
C. diptherae	—	—

Pus and Discharges

Strep. Haemolytic	1	—
S. albus	11	—
S. aureus	9	—
B. coli	3	—
B. proteus	1	—
S. saprophyticus	3	1

C.S.F.

N. meningitidis	1	—
S. albus	1	—
B. pyocyaneus	1	—

Meat cultures

Total 25 investigations. No positive findings.

HISTOLOGY			102
Autopsy material	28		
Animal brains	12		
Surgical specimens, biopsy etc.	50		
Uterine biopsy	12		

SECTIONS INCLUDED

Basal cell carcinoma of lip
Epidernoid carcinoma
Lipoma
Teratoma
Primary carcinoma of liver
Adenocarcinoma
Intraduct carcinoma of breast
Tuberculous lymphadenitis
Tuberculous endometritis

POST-MORTEM EXAMINATION			231
Coroner's	154		
Hospital	45		
Asylum	24		
Prisons	8		

Cause of Death:

CARDIO-VASCULAR SYSTEM			34
Rupture of aortic aneurysm		4	
Rupture of pulmonary artery		1	
Coarctation of aorta		1	
Coronary artery occlusion		6	
Coronary thrombosis		4	
Myocardial infraction		1	
Aortic incompetence		1	
Mitral Stenisis		1	
Subacute bacterial endocarditis		2	
Mycardial degeneration		2	
Hypertensive cardiac failure		4	
Acute cardiac failure		1	
Congestive cardiac failure		3	
Pick's disease		1	
Pulmonary Embolus		2	

RESPIRATORY SYSTEM			32
Lobar pneumonia	9		
Broncho pneumonia	5		
Inhalation pneumonia (oil)	1		
Status asthmatics	1		
Tuberculosis	14		
Carcinoma of bronchus	2		
ALIMENTARY SYSTEM			28
Gastro enteritis	1		
Volvulus small intestine	1		
Intestinal obstruction	3		
Strangulated internal hernia	1		
Strangulated umbilical hernia	1		
Strangulated inquinal hernia	1		
Mesenteric thrombosis	1		
Haemorrhagefrom Gastric Ulcer	1		
Acute appendicitis	1		
Peritonitis	1		
Pyloric Sternosis	1		
Ante-natal perportation of Small intestine	1		
Carcinoma of colon	1		
Carcinoma of pancreas	1		
Carcinoma of liver	4		
Hepatitis	4		
Acute yellow atrophy	1		
Subacute yellow atrophy	2		
Haemorrhage from cesophageal varix	1		
HAEMOPOETIC SYSTEM			3
Sickle cell anaemia	1		
Hodgekin's disease	2		
RENAL			2
Hypernephroma	1		
Hydronephrosis	1		
REPRODUCTIVE SYSTEM			1
Toxaemia of pregnancy	1		
CENTRAL NERVOUS SYSTEM			17
Cerebral haemorrhage		2	
Cerebellar haemorrhage		1	
Subarachnoid haemorrhage		2	
Subdural haemorrhage		1	
Epilepsy		1	
Meningitis tuberculous		1	
Meningitis memingococcal		2	
Meningitis unclassified		6	
Syphilis (G.P.I.)		1	
SPECIFIC INFECTIONS, PARASITES			21
Malaria cerebral		2	
Amoebic dysentery		6	
Amoebic hepatitis		3	
Amoebic Abscess		1	
Typhoid		7	
Syphilis		1	
Tetanus		1	
GENERAL			31
Beri-Beri		2	
Malnutrition		17	
Senility		1	
Septicarnia		1	
Diabetes		1	
Post-operative shock		1	
Cause unknown		8	

TRAUMATIC AND ACCIDENTAL							62
Fracture of pelvis				1			
Fracture of skull				10			
Cerebral contusion				2			
Concussion				1			
Multiple injuries				15			
Traumatic rupture aorta				1			
Rupture of liver				1			
Rupture of spleen				3			
Burns				3			
Haemorrhage (torn mesentery)				1			
Electrucution				2			
Shot gun wound				1			
Strangulation				1			
Ergot poisoning				1			
Drowning				14			
Inhalation of foreign bodies vomit etc.				5			
MEDICO-LEGAL							55
		Total	*Blood*	*Spermatozoa*	*Gonococci*		
Clothes		20	14	1	—		
Smears		16	—	2	—		
Weapons		9	6	—	—		
Twigs		3	3	—	—		
Iron pot		1	1	—	—		
Mats		2	2	—	—		
Miscellaneous articles		3	—	—	—		
Blood alcohol		1	—	—	—		
VETERINARY							
Rats	3,630	R. rattus	2,478	R. Novegicus	1,152		
Fleas	9	X. Cheopis	6	X. braziliensis	3		
Dog brains	12	Rabies	5				
C.F.S. KAHN							12
				Europeans	*Africans*		
Positive				NIL	NIL		
WATER EXAMINATIONS							225
				Total	*Unsatisfactory*		
Freetown				130	—		
Kissy Reservoir				20	1		
Lungi				63	—		
Others				12	—		
MISCELLANEOUS							783
				Africans	*Europeans*		
Blood Grouping				452	47		
Coombs Test				4	2		
C.F.S. Examinations				43	—		
Gland punctures				15	—		
Bone marrow Biopsy				2	—		
Bleeding time				1	—		
Seminal fluid Exam.				48	—		
Stomach contents				27	—		
Skin and mucosal scrapings				57	1		
BIOCHEMISTRY							463
Africans	443						
Europeans	20						
				Africans	*Europeans*		
Blood Urea				99	2		
Glucose tolerance				25	2		
Fasting Test Meal				13	3		
Blood Sugar				140	1		
Serum Proteins				17	1		
Liver Function Tests				25	8		
C.S.F. Biochemistry				21	—		
Urinary Chlorides (Fantus)				2	—		
Clotting time				12	1		
Blood calcium				12	2		

SUMMARY OF THE VARIOUS TESTS UNDERTAKEN IN THE FREETOWN LABORATORY DURING THE YEAR, 1957

Blood Films	5,188
Faeces	2,829
Urine	3,634
Sputum	3,742
Venereal diseases	206
Kahn tests	6,721
Laughlen tests	6,794
Vidal reaction	247
Blood Sedimentation Rater	1,812
Haematology	4,340
Bacteriology	1,263
Histology	102
Postmortems	231
Medico-Legal	55
Veterinary (Rats examined)	3,630
Fleas	9
Dog Brains	12
C.S.F. Kahn	12
Water examination	225
GRAND TOTAL	41,052

TOTAL NUMBER OF SPECIMENS EXAMINED IN BO HOSPITAL LABORATORY DURING THE YEAR, 1957

Blood Films	4,382
Faeces	1,752
Sputum	546
Veneral Diseases	64
B.S.R.	404
Urine	1,719
Haematology	1,417
Miscellaneous	39
Laughlen Test	2,075
GRAND TOTAL	12,398

APPENDIX III

MISSION AND MINING HOSPITALS AND DISPENSARIES BED STRENGTH

Name and Mission	*Place*	*NUMBER AND CATEGORY OF BEDS*					*Remarks*
		General	*Obstetrical*	*Tuberculosis*	*Infectious*	*Mental*	
MISSION HOSPITALS							
American Wesleyan ..	Kamakwie	36	2	—	1	—	+ 2 Cots
Evangelical United Brethren in Christ	Rotifunk	26	10	—	—	—	+ 2 Cots
	Tiama	—	12	—	—	—	
Methodist	Segbwema	70	25	11	6	—	+16 Cots
Roman Catholic	Serabu	43	2	—	—	—	+ 3 Cots
United Brethren American ..	Mattru Jong	10	3	—	—	—	+ 3 Cots
MISSION DISPENSARIES (NOT UNDER THE CARE OF A RESIDENT MEDICAL OFFICER)							
American Wesleyan ..	Kukuna *via* Rokupr	2	1	—	—	—	
	Bendembu *via* Makeni ..	—	1	—	—	—	
	Massumbo *via* Makeni ..	—	—	—	—	—	
	Kamabai *via* Makeni	—	—	—	—	—	
	Bafodia *via* Kabala	—	—	—	—	—	
United Brethren American ..	Gbangbaia (visited monthly) ..	—	—	—	—	—	
Missionary Church Association	Yifin (Niemi Chiefdom) ..	7	—	—	—	—	
	Sambaia Bendugu	—	—	—	—	—	
	Mayoso	—	2	—	—	—	
Methodist	Bunumbu	4	—	—	—	—	
	Jojoima	2	—	—	—	—	
Evangelical United Brethren in Christ	Jaiama	—	4	—	—	—	
MINING HOSPITALS							
Sierra Leone Selection Trust ..	Yengema	35	8	2	10	—	
Sierra Leone Development Company	Marampa	30	4	—	6	—	+8 Cots
MINING DISPENSARY (NOT UNDER THE CARE OF A RESIDENT MEDICAL OFFICER)							
Sierra Leone Development Company	Pepel	—	—	—	—	—	
	Total	265	74	13	23	—	+24 Cots

APPENDIX IV

LIST OF DISPENSARIES AND HEALTH CENTRES

Area	*Place*	*Type of unit*
Colony	Regent	Dispensary
,,	Kent	,,
,,	York	Health Centre
,,	Waterloo	,, ,,
,,	Songo	Lock-up
,,	Hastings	Dispensary
,,	Newton	Lock-up
,,	Kissy	Dispensary
,,	Wellington	Lock-up
,,	Bananas	,,
,,	Hamilton	,,
,,	Goderich	,,
,,	Russell	,,
South-western Province ..	Bauya	Dispensary
,,	Mabang	,,
,,	Mano	Health Centre
,,	Koribundu	,, ,,
,,	Sembehun	,, ,,
,,	Sulima	Dispensary
,,	Sumbuya	Health Centre
,,	Gbap	Dispensary
,,	York Island	,,
,,	Zimi	Health Centre
,,	Madina	,, ,,
,,	Shenge	,, ,,
South-eastern Province ..	Blama	Dispensary
,,	Pendembu	Health Centre
,,	Daru	,, ,,
,,	Koidu	Dispensary (up to 30/9/57)
,,	Kaiyima	Health Centre
Northern Province	Yonnibana	Health Centre
,,	Kambia	,, ,,
,,	Batkanu	Dispensary
,,	Lunsar	Health Centre
,,	Falaba	,, ,,
,,	Yele	,, ,,
,,	Numea	,, ,,
,,	Gbinti	,, ,,
,,	Bumbuna	,, ,,
,,	Makali	,, ,,
,,	Kychom	,, ,,

APPENDIX V

YELLOW FEVER ANTIBODY SURVEY—SIERRA LEONE (MAY 1957)

	Age yrs.	5			5–9			10–14			15–19			20–24			25–29			30–39			40			*Total (all age groups)*		
		+	—	%+	+	—	%+	+	—	%+	+	—	%+	+	—	%+	+	—	%+	+	—	%+	+	—	%+	+	—	%+
1	M				0	3	0	0	2	0	0	10	0	2	10	17	5	20 (+ID)	9	15	17	47	2	8	20	24	70 (+ID	25
	F				0	7	0	0	4	0	0	6	0	3	9	25	1	9	10	3	5	38	1	5	17	8	45	15
	T				0	10	0	0	6	0	0	16	0	5	19	21	6	29 (+ID)	17	18	22	45	3	13	19	32	115 (+ID)	22
2	M	0	1	0	1	15	6	2	13	13	6	10	35	6	9	40	0	7	53	12	21	36	13	12	52	48	88	35
	F	0	2	0	0	13	0	1	5	17	1	18 (+ID)	5	2	11	15	2	10	17	2	10	20	1	4	20	9	73 (+ID)	11
	T	0	3	0	1	28	4	3	18	14	7	28	19	8	20	29	10	17	37	14	31	31	14	16	47	57	161 (+ID)	26
3	M				0	4	0	1	11	8	4	12	25	3	7	30	8	12	40	12	12	50	4	4	50	32	62	34
	F				0	5	0	1	21	5	2	8	20	2	4	33	0	8	0	1	3	25	1	0	100	7	49	12
	T				0	9	0	2	32	6	6	20	23	5	11	31	8	20	29	13	15	46	5	4	56	39	111	26
4	M				0	0	0	0	4	0	1	5	17	0	5	0	3	7	30	8	13	38	3	1	75	15	35	30
	F				0	2	0	0	1	0	0	8	0	1	11	8	1	11	8	3	4	43	0	0	0	5	37	12
	T				0	2	0	0	5	0	1	13	7	1	16	6	4	18	18	11	17	39	3	1	75	20	72	22

KEY: M = Male
F = Female
T = Total
\+ Yellow Fever Protection Tes POSITIVE
— Yellow Fever Protection Test NEGATIVE
D—Yellow Fever Protection Test DOUBTFUL

DISTRICTS: 1. Kenema (S. Eastern)
2. Kabala (Northern) 3. Rokupr (S.W.)
4. Magburaka (Central)

YELLOW FEVER ANTIBODY SURVEY ON MONDY SERA
SIERRA LEONE (MAY 1957)

SPECIES AND PROTECTION TEST RESULT

	Cercopithecus mona		*Cercocebus torquatus alys*		*Colobus polykomos*		*Colobus badius*	
District	*POS.*	*NEG.*	*POS.*	*NEG.*	*POS.*	*NEG.*	*POS.*	*NEG.*
Kenema ..	2	3	9	7	I		I	3
Kabala ..		2			I	I		
Rokupr ..	4	I	I					
Magburaka ..		I						

APPENDIX II

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Intermediate List No.	*Detailed List No.*	*DISEASES* Cause Groups	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
A 1	001–008	Tuberculosis of respiratory system	16	2	—	—	18	2	84	45	11	11	249	124
A 2	010	Tuberculosis of meninges and central nervous system	—	—	—	—	—	—	2	3	1	—	3	5
A 3	011	Tuberculosis of intestines, peritoneum and mesenteric glands	1	2	—	—	1	2	—	—	—	—	—	—
A 4	012, 013	Tuberculosis of bones and joints	—	2	—	—	—	2	2	5	—	—	5	7
A 5	014–019	Tuberculosis all other forms	—	—	—	—	—	—	4	3	—	—	22	13
A 6	020	Congenital syphilis	—	—	—	—	—	—	—	—	—	—	32	13
A 7	021	Early syphilis	2	—	—	—	2	—	1	1	—	—	4	2
A 8	024	Tabes dorsalis	—	—	—	—	—	—	1	—	—	—	1	—
A 9	025	General paralysis of insane	—	—	—	—	—	—	1	—	1	—	6	3
A 10	022, 023, 026–029	All other syphilis	1	—	—	—	1	—	28	5	—	—	347	177
A 11	030–035	Gonococcal infections	—	—	—	—	2	—	117	29	1	1	6,677	2,531
A 12	040	Typhoid fever	3	—	—	—	3	—	10	14	2	—	10	14
A 13	041, 042	Paratyphoid fever and other salmonella infections	—	—	—	—	—	—	1	1	—	—	1	1
A 14	043	Cholera	—	—	—	—	—	—	—	—	—	—	—	—
A 15	044	Brucellosis (undulant fever)	—	—	—	—	—	—	—	—	—	—	11	0
A 16	(*a*)045	Bacillary dysentery	2	—	1	—	3	—	38	26	4	4	66	52
	(*b*)046	Amœbiasis	3	1	—	—	11	7	101	57	12	2	385	218
	(*c*)047, 048	Other unspecified forms of dysentery ..	2	—	—	—	2	—	44	46	5	4	226	180
A 17	050	Scarlet fever	—	—	—	—	—	—	2	—	—	—	2	—
A 18	051	Streptococcal sore throat	6	2	—	—	27	21	—	—	—	—	454	136
		Carried forward	36	9	1	—	70	34	436	235	37	22	8,501	3,484

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Intermediate List No.	*Detailed List No.*	*DISEASES* Cause Groups	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		Brought forward	36	9	1	—	70	34	436	235	37	22	8,501	3,484
A 19	052	Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—
A 20	053	Septicæmia and pyæmia	1	1	—	—	1	1	4	1	2	1	4	1
A 21	055	Diptheria	—	—	—	—	—	—	—	1	—	—	6	2
A 22	056	Whooping Cough	1	—	—	—	2	—	14	17	—	—	117	66
A 23	057	Meningococcal infections	—	—	—	—	—	—	52	34	9	5	52	34
A 24	058	Plague	—	—	—	—	—	—	—	—	—	—	—	—
A 25	060	Leprosy	—	—	—	—	—	—	13	11	3	4	635	420
A 26	061	Tetanus	1	—	1	—	1	—	49	57	18	14	75	86
A 27	062	Anthrax	—	—	—	—	—	—	—	—	—	—	—	—
A 28	080	Acute Poliomyelitis	—	—	—	—	—	—	2	1	—	—	2	1
A 29	082	Acute infectious encephalitis	—	—	—	—	—	—	—	1	—	1	4	7
A 30	081, 083	Late effects of acute poliomyelitis and acute infectious encephalitis	—	—	—	—	—	—	—		—	—	1	1
A 31	084	Smallpox	—	—	—	—	—	—	647	210	33	10	1,065	483
A 32	085	Measles	3	2	—	—	3	2	57	56	6	—	297	287
A 33	091	Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—
A 34	092	Infectious hepatitis	10	1	—	—	13	2	20	7	2	1	77	52
A 35	094	Rabies	—	—	—	—	—	—	1	—	1	—	1	—
A 36	(*a*)100	Louse-borne epidemic typhus	—	—	—	—	—	—	—	—	—	—	—	—
	(*b*)101	Flea-borne endemic typhus (murine) ..	—	—	—	—	—	—	—	—	—	—	—	—
	(*c*)104	Tick-borne epidemic typhus	—	—	—	—	—	—	—	—	—	—	—	—
	(*d*)105	Mite-borne epidemic typhus	—	—	—	—	—	—	—	—	—	—	—	—
		Carried forward	52	13	2	—	90	39	1,295	631	111	58	10,837	4,924

APPENDIX II—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Intermediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward	52	13	2	—	90	39	1,295	631	111	58	10,837	4,924
A	36(*e*) 102, 103, 106-108	Other and unspecified typhus	—	—	—	—	—	—	—	—	—	—	—	—
A	37(*a*)110	Vivax malaria (benign tertian)	—	—	—	—	—	—	6	3	—	—	6	3
	(*b*)111	Malariæ malaria (quartan)	—	—	—	—	—	—	14	9	—	—	406	446
	(*c*)112	Falciparum malaria (malignant tertian) ..	22	6	—	—	30	13	251	210	17	19	2,733	1,470
	(*d*)115, (*e*)113, 114,	Blackwater fever	—	—	—	—	—	—	2	1	1	1	2	1
	(*e*)113 114, 116,117	Other and unspecified forms of malaria ..	20	3	—	—	57	9	677	452	33	18	13,899	8,108
A	38(*a*)123.0	Schistosomiasis vesical (S. hæmatobium) ..	—		—	—	—	—	6	6	1	—	210	117
	(b)123.1	Schistosomiasis intestinal (S. mansoni) ..	1	—	—	—	1	—	4	—	—	—	48	43
	(c)123.2	Schistosomiasis pulmonary (S. japonicum) ..	—	—	—	—	—	—	—	—	—	—	—	—
	(*d*)123.3	Other and unspecified schistosomiasis ..	—	—	—	—	—	—	2	11	—	—	126	98
A	39 125	Hydatid diseases	—	—	—	—	—	—	—	—	—	—	—	—
A	40(*a*)127	Onchocerciasis	—	—	—	—	—	—	—	—	—	—	1	—
	(*b*)	Loiasis	—	—	—	—	—	—	—	—	—	—	—	—
	(*c*)	Filariasis (bancrofti)	—	—	—	—	—	—	10	1	—	—	49	17
	(d)	Other filariasis	—	—	—	—	—	—	—	—	—	—	9	7
A	41 129	Ankylostomiasis	1	1	—	—	1	1	29	17	—	1	193	154
A	42(*a*)126	Tapeworm (infestation) and other cestode infestations	5	1	—	—	6	3	33	17	—	—	254	230
	(*b*)130.0	Ascariasis	—	2	—	—	12	18	24	20	—	2	1,796	1,622
	(*c*)130.3	Guinea worm (dracunculosis)	—	—	—	—	—	—	5	4	—	—	5	4
		Carried forward	101	26	2	—	197	83	2,358	1,382	163	99	30,574	17,244

APPENDIX II—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Intermediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward	101	26	2	—	197	83	2,358	1,382	163	99	30,574	17,244
A	42 (*d*) 124, 128,130, 130.2	Other diseases due to helminths	3	—	—	—	3	8	—	3	—	—	522	336
A	43(*a*) 037	Lymphogranuloma venereum	—	—	—	—	—	—	14	1	—	—	401	155
	(*b*) 038	Granuloma inguinale, venereal	3	—	—	—	3	—	18	3	—	—	241	56
	(*c*) 039	Other and unspecified venereal diseases ..	—	—	—	—	—	—	17	1	—	—	750	323
	(*d*) 049	Food poisoning infection and intoxication ..	1	5	—	—	2	5	2	3	—	1	34	11
	(*e*) 071	Relapsing fever	—	—	—	—	—	—	—	—	—	—	—	—
	(*f*) 072	Leptospirosis icterohæmorrhagica (Weil's disease)	—	—	—	—	—	—	—	—	—	—	50	46
	(*g*) 073	Yaws	—	—	—	—	—	—	—	2	—	—	2,215	1,687
	(*h*) 087	Chickenpox	—	—	—	—	—	—	13	3	—	—	87	33
	(*i*) 090	Dengue	—	—	—	—	1	—	—	—	—	—	—	—
	(*j*) 095	Trachoma	—	—	—	—	—	—	—	—	—	—	—	—
	(*k*) 096.7	Sandfly fever	—	—	—	—	—	—	—	—	—	—	—	—
	(*l*) 120	Leishmaniasis	—	—	—	—	—	—	—	—	—	—	—	—
	(*m*) 121(*a*)	Trypanosomiasis gambiensis	—	—	—	—	—	—	3	2	—	—	3	4
	(*b*)	Trypanosomiasis rhodesiensis	—	—	—	—	—	—	—	—	—	—	—	—
	(*c*)	Other and unspecified trypanosomiasis ..	—	—	—	—	—	—	4	1	—	—	5	4
		Carried forward	108	31	2	—	206	96	2,429	1,401	163	100	34,882	19,899

APPENDIX I—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Inter-mediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*F.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward ..	108	31	2	—	206	96	2,429	1,401	163	100	34,882	19,899
A	43(*h*)131	Dermatophytosis	1	1	—	—	14	3	—	—	—	—	38	16
	(*o*)135	Scabies	1	—	—	—	4	6	10	10	—	—	2,330	1,549
	(*p*) 036, 054, 059, 063, 064, 070, 074, 086, 088, 089, 093, 096, 1–096.6, 096.8, 096.9, 122, 132–134, 136–138	All other diseases classified as infective and parasitic	8	2	—	—	11	5	34	13	—	2	1,566	1,418
A	44	140–148 Malignant neoplasm of buccal cavity and pharynx	—	—	—	—	—	—	2	—	2	—	2	—
A	45	150 Malignant neoplasm of œsophagus	—	—	—	—	—	—	2	—	1	—	2	—
A	46	151 Malignant neoplasm of stomach	—	—	—	—	—	—	4	13	1	—	4	17
A	47	152, 153 Malignant neoplasm of intestines, except rectum	—	—	—	—	—	—	2	—	—	—	2	—
A	48	154 Malignant neoplasm of rectum	—	1	—	—	—	1	1	1	—	—	1	1
A	49	161 Malignant neoplasm of larynx	—	—	—	—	—	—	—	—	—	—	—	—
A	50	162, 163 Malignant neoplasm of trachea, and of bronchus and lung	2	—	—	—	2	—	—	6	—	—	—	11
A	51	170 Malignant neoplasm of breast	—	1	—	—	—	1	—	6	—	—	—	11
A	52	171 Malignant neoplasm of cervix uteri	—	—	—	—	—	—	—	4	—	—	—	4
		Carried forward ..	120	36	2	—	237	112	2,484	1,454	167	102	38,827	22,926

APPENDIX I—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Intermediate List No.	*Detailed List No.*	*DISEASES* Cause Groups	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		Brought forward	120	36	2	—	237	112	2,484	1,454	167	102	38,827	22,926
A 53	172–174	Malignant neoplasm of other and unspecified parts of uterus	—	—	—	—	—	—	—	24	—	1	—	41
A 54	177	Malignant neoplasm of prostate	—	—	—	—	—	—	1	—	—	—	1	5
A 55	190, 191	Malignant neoplasm of skin	—	—	—	—	—	—	—	1	—	—	1	1
A 56	196, 197	Malignant neoplasm of bone and connective tissue	—	—	—	—	—	—	4	1	2	—	44	25
A 57	155–160, 164, 165, 175, 176, 178–181, 192–195, 198, 199	Malignant neoplasm of all other and unspecified sites	1	—	—	—	1	—	11	20	—	—	48	40
A 58	204	Leukæmia and aleukæmia	—	—	—	—	—	—	—	—	—	—	—	—
A 59	200–203	Lymphosareoma and other neoplasms of lymphatic and hæmatopoietic system	—	—	—	—	—	—	4	—	4	—	4	—
A 60	210–239	Benign neoplasm and neoplasms of unspecified nature	8	4	—	—	11	11	22	41	—	—	61	62
A 61	250, 251	Nontoxic goitre	—	—	—	—	—	—	2	1	—	—	2	4
A 62	252	Thyrotoxicosis with or without goitre ..	—	—	—	—	—	—	—	1	—	—	1	4
A 63	260	Diabetes mellitus	3	2	—	—	3	2	10	6	2	—	41	22
A 64	(*a*)280	Beriberi	1	—	—	—	1	—	1	1	—	—	3	1
	(*b*)	Pellagra	—	—	—	—	—	—	—	—	—	—	3	1
	(*c*)282	Scurvy	1	—	—	—	1	—	—	—	—	—	4	2
		Carried forward	134	42	2	—	254	125	2,539	1,550	176	103	39,040	23,134

APPENDIX II—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Intermediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward	134	42	2	—	254	125	2,539	1,550	176	103	39,040	23,134
A	64(*d*)283–286	Other deficiency states	3	—	—	—	6	—	35	133	2	10	1,229	1,008
A	65(*a*)290	Pernicious and other hyperchromic anæmiæ ..	—	—	—	—	—	—	10	10	—	1	557	358
	(*b*)291	Iron deficiency anæmiæ (hypochromic) ..	1	—	—	—	1	7	37	76	1	6	296	318
	(*c*)292, 293	Other specified and unspecified anæmiæ ..	3	5	—	—	7	14	107	125	18	10	1,428	1,429
A	66(*a*)241	Asthma	12	6	—	—	21	9	22	7	—	—	182	115
	(*b*)240, 242–245, 253, 254, 270–277, 287–289, 294–299	All other allergic disorders, endocrine' metabolic and blood disease	6	1	—	—	16	18	7	8	—	—	374	193
A	67 300–309	Psychoses	2	2	—	—	2	2	5	1	—	—	5	3
A	68 310–324, 326	Psychoneuroses and disorders of personality ..	17	6	—	—	25	17	7	2	—	—	12	2
A	69 325	Mental deficiency	—	—	—	—	—	—	2	4	—	—	3	6
A	70 330–334	Vascular lesions affecting central nervous system	3	2	—	1	3	2	12	5	1	—	28	18
A	71 340	Nonmeningococcal meningitis	—	—	—	—	—	—	13	5	2	1	13	5
A	72 345	Multiple sclerosis	—	—	—	—	—	—	—	—	—	—	24	6
A	73 353	Epilepsy	—	—	—	—	—	—	8	2	—	—	42	19
A	74 370–379	Inflammatory disease of eye	3	—	—	—	20	13	21	11	—	—	1,643	726
A	75 385	Cataract	—	—	—	—	—	—	2	—	—	—	62	44
A	76 387	Glaucoma	—	—	—	—	—	—	—	—	—	—	7	3
A	77(*a*)390	Otitis externa	2	—	—	—	16	2	5	5	—	—	107	87
		Carried forward	186	64	2	1	371	209	2,832	1,944	200	131	45,052	27,474

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Inter-mediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward	186	64	2	1	371	209	2,832	1,944	200	131	45,052	27,474
A	77(*b*)391–393	Otitis media and mastoiditis	1	—	—	—	28	19	8	4	—	—	419	266
	(*c*)394	Other inflammatory diseasesof ear	4	—	—	—	59	22	6	15	—	—	600	474
A	78(*a*)380–384, 386, 388, 389 (*b*)341, 344, 350–352, 354–357, 360–369, 395 398	All other diseases and conditions of eye ..	—	—	—	—	3	2	31	19	—	—	1,124	651
		All other diseases of the nervous system and sense organs	2	—	—	—	5	2	25	15	1	1	632	391
A	79 400–402	Rheumatic fever	—	1	—	—	—	1	4	3	—	—	18	8
A	80 410–416	Chronic rheumatic heart disease	1	—	—	—	1	—	5	6	—	1	5	6
A	81 420–422	Arteriosclerotic and degenerative heart disease	3	—	1	—	3	—	26	7	4	2	29	9
A	82 430–434	Other diseases of heart	1	—	—	—	1	—	67	37	16	7	317	223
A	83 440–443	Hypertension with heart disease	2	—	1	—	2	1	8	7	1	—	17	17
A	84 444–447	Hypertension without mention of heart ..	3	1	—	—	5	7	21	17	1	—	77	63
A	85 450–456	Diseases of arteries	2	—	—	—	2	—	8	4	2	—	8	4
A	86 460–468	Other diseases of circulatory system	4	—	—	—	11	3	25	15	2	2	435	133
A	87 470–475	Acute upper respiratory infections	22	8	—	—	128	88	36	34	1	—	2,212	1,337
A	88 480–483	Imfluenza	14	3	—	—	41	5	126	91	—	4	4,136	2,768
A	89 490	Lobar pneumonia	2	1	—	—	3	3	273	97	15	4	350	154
A	90 491	Broncho pneumonia	4	2	2	—	5	2	207	222	33	19	361	325
A	91 492, 493	Primary typical, other and unspecified pneumonia	2	—	—	—	2	—	87	58	5	8	117	75
		Carried forward	253	80	6	1	670	364	3,795	2,595	281	179	55,909	34,378

APPENDIX II—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Inter-mediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward	253	80	6	1	670	364	3,795	2,595	281	179	55,909	34,378
A 92	500	Acute bronchitis	10	—	—	—	27	10	62	65	2	2	1,527	835
A 93	501, 502	Bronchitis, chronic and unqualified ..	9	1	—	—	14	2	56	57	1	—	2,225	1,444
A 94	510	Hypertrophy of tonsils and adenoids ..	1	1	—	—	6	2	2	4	—	—	317	234
A 95	518, 521	Empyema and abscess of lung ..	—	—	—	—	—	—	1	—	—	—	1	—
A 96	519	Pleurisy	—	—	—	—	—	4	19	10	—	—	94	72
A 97	(*a*)523 (*b*)511–517, 520–522, 524–527	Pneumoconiosis	—	—	—	—	—	—	—	—	—	—	—	—
		All other respiratory diseases	4	—	1	—	14	3	52	56	3	8	3,746	2,197
A 98	(*a*)530	Dental caries	—	—	—	—	10	1	4	3	—	—	1,156	798
	(*b*)531–535	All other diseases of teeth and supporting structures	1	—	—	—	5	1	10	5	2	—	453	380
A 99	540	Ulcer of stomach	2	—	—	—	6	—	19	5	—	—	83	21
A 100	541	Ulcer of duodenum	7	2	—	—	8	3	5	—	—	—	23	3
A 101	543	Gastritis and duodenitis	15	3	—	—	23	5	11	2	1	—	211	78
A 102	550–553	Appendicitis	22	13	—	—	29	15	33	19	2	—	43	21
A 103	560, 561, 570	Intestinal obstruction and hernia	10	2	1	—	10	2	700	28	23	1	1,173	59
A 104	(*a*)571.0	Gastro-enteritis and colitis between four weeks and two years	2	—	—	—	2	—	35	39	16	4	309	275
	(*b*)571.1	Gastro-Enteritis and colitis, ages two years and over	26	3	3	—	52	12	163	137	12	4	1,719	1,201
	(*c*)572	Chronic enteritis and ulcerative colitis ..	—	—	—	—	—	—	21	9	1	—	129	76
A 105	581	Cirrhosis of liver	—	1	—	—	—	1	20	4	3	—	24	8
A 106	584,585	Cholelithiasis and cholecystitis	4	2	—	—	5	2	2	3	—	—	16	19
A 107	536–539, 542, 544, 545, 573–580, 582, 583, 586, 587	Other diseases of digestive system	29	8	—	—	84	41	87	136	11	8	5,183	3,299
		Carried forward	395	116	11	1	965	468	5,097	3,177	358	206	74,341	45,398

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

DISEASES			*EXPATRIATES*						*NON-EXPATRIATES*					
Inter-mediate List No.	*Detailed List No.*	CAUSE GROUPS	*In-Patients*		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		Brought forward	395	116	11	1	965	468	5,097	3,177	358	206	74,341	45,398
A 108	590	Acute nephritis	—	—	—	—	1	—	14	10	—	1	15	12
A 109	591–594	Chronic, other and unspecified nephritis ..	—	—	—	—	—	—	7	22	—	—	34	18
A 110	600	Infections of kidney	2	1	—	—	2	6	7	28	—	—	34	44
A 111	602, 604	Calculi or uninary system	7	2	—	—	8	2	3	—	—	—	4	1
A 112	610	Hyperplasia of prostate	1	—	—	—	1	—	1	5	1	—	42	5
A 113	620, 621	Diseases of breast	—	—	—	—	—	—	—	33	—	—	—	135
A 114	(*a*)613	Hydrocele	4	1	—	—	4	1	96	—	1	—	762	—
	(*b*)634	Disorders of menstruation	—	14	—	—	—	30	—	114	—	—	—	1,663
	(*c*)601, 603, 605–609, 611, 612, 614–617, 622–633, 635–637	All other diseases of the genito-urinary system	16	16	—	—	42	28	98	110	4	3	1,822	2,396
A 115	640,641, 681, 682, 684	Sepsis of pregnancy, childbirth and the puerperium	—	—	—	—	—	—	—	15	—	1	—	16
A 116	642, 652, 685, 686	Toxæmias of pregnancy and the puerperium	—	10	—	1	—	16	—	122	—	3	—	38
A 117	643, 644, 670–672	Hæmorrhage of pregnancy and childbirth ..	—	2	—	—	—	2	—	71	—	3	—	48
A 118	650	Abortion without mention of sepsis or toxaemia	—	9	—	—	—	9	—	187	—	1	—	295
A 119	651	Abortion with sepsis	—	12	—	—	—	14	—	64	—	4	—	119
A 120	(*a*)645–649, 673–680, 683, 687–689	Other complications of pregnancy, childbirth and the puerperium	—	3	—	—	—	4	—	504	—	22	—	281
		Carried forward	425	186	11	2	1,023	580	5,323	4,462	364	244	77,054	50,469

APPENDIX I—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Inter-mediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward	425	186	11	2	1,023	580	5,323	4,462	364	244	77,054	50,469
A	120(*b*)660	Delivery without complications	—	1	—	—	—	2	—	3,055	—	3	—	1,452
A	121 690–698	Infections of skin and subcutaneous tissue ..	42	8	—	—	133	51	120	177	3	2	2,743	1,666
A	122 720–725	Arthritis and spondylitis	3	1	—	—	11	5	60	27	1	—	892	542
A	123 726–727	Muscular rheumatism and rheumatism unspecified	4	5	—	—	35	21	40	21	—	—	4,034	2,228
A	124 730	Osteomyelitis and periostitis	4	—	—	—	4	—	20	8	1	—	426	137
A	125 737, 745–749	Ankylosis and acquired musculoskeletal deformitis	—	3	—	—	1	3	7	3	—	—	131	57
A	126(*a*)715	Chronic ulcer of skin(including tropical ulcer) ..	1	—	—	—	7	1	162	77	—	—	6,101	2,960
	(*b*)700–714, 716	All other diseases of skin	4	—	—	—	70	44	25	27	—	1	1,814	1,369
	(*c*)731–736, 738–744	All other diseases of musculoskeletal system ..	4	—	—	—	20	9	28	21	—	—	838	448
A	127 751	Spina bifida and meningocele	—	—	—	—	7	9	—	—	—	—	—	—
A	128 754	Congenital malformations of circulatory system	—	—	—	—	—	—	—	—	—	—	—	—
A	129 750, 752, 753 755–759	All other congenital malformations	—	—	—	—	—	—	40	18	3	2	72	45
A	130 760, 761	Birth injuries	—	—	—	—	—	—	—	—	—	—	1	—
A	131 762	Post-natal asphyxia and atelectasis	—	—	—	—	—	—	—	—	—	—	—	—
A	132(*a*)764	Diarrhoea of newborn (under 4 weeks) ..	—	—	—	—	—	—	—	1	—	—	10	11
	(*b*)765	Ophthalmia neonatorum	—	—	—	—	—	—	5	—	—	—	74	21
	(*c*)763, 766–768	Other infections of newborn	—	—	—	—	—	—	2	1	—	—	12	15
		Carried forward	487	204	11	2	1,311	725	5,832	7,898	372	252	94,202	61,420

APPENDIX II—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Intermediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward	487	204	11	2	1,311	725	5,832	7,898	372	252	94,202	61,420
A 133	770	Hæmolytic disease of newborn	—	—	—	—	—	—	—	—	—	—	—	—
A 134	769, 771, 772	All other defined diseases of early infancy ..	—	—	—	—	—	—	32	37	3	3	322	128
A 135	773, 776	Ill-defined diseases peculiar to early infancy and immaturity, unqualified	—	—	—	—	—	—	8	3	1	—	9	4
A 136	794	Senility without mention of psychosis ..	1	—	—	—	1	—	5	2	—	—	15	3
A 137	(*a*)788.8	Pyrexia of unknown origin	8	3	1	—	8	5	61	53	3	4	279	133
	(*b*)793	Observation, without need for further medical care	19	3	—	—	48	6	29	117	1		121	202
	(*c*)780–787, 788.1–788.7,788.9, 789–792, 795	All other ill-defined causes of morbidity ..	49	22	4	—	180	95	506	326	25	15	5,019	3,065
			564	232	16	2	1,548	831	6,473	8,436	405	274	99,967	64,955

APPENDIX II—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

DISEASES			*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out Patient*	
"E" CODE—ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONINGS AND VIOLENCE (EXTERANL CAUSE)														
Intermediate List No.	*Detailed List No.*		*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
		Brought forward	564	232	16	2	1,548	831	6,473	8,436	405	274	99,967	64,955
AE 138	E810–E835	Motor vehicle accidents	23	2	—	—	35	8	123	23	3	—	2,358	904
AE 139	E800–E802, E840–E866	Other transport accidents	1	—	—	—	4	—	55	11	6	1	1,387	402
AE 140	E870–E895	Accidental poisoning	—	1	—	—	—	2	6	5	2	—	14	8
AE 141	E900–E904	Accidental falls	33	5	—	—	136	39	182	45	11	3	4,758	1,752
AE 142	E912	Accident caused by machinery	4	—	—	—	4	—	23	2	—	—	864	152
AE 143	E916	Accident caused by fire and explosion of combustible material	3	—	—	—	5	—	25	19	3	3	240	168
AE 144	E917, E918	Accident caused by hot substance, corrosive liquid, steam and radiation	1	—	—	—	1	3	35	18	1	2	370	218
AE 145	E919	Accident caused by firearm	—	—	—	—	—	—	43	2	1	—	101	14
		Carried forward	629	240	16	2	1,733	883	6,965	8,561	432	283	110,059	68,573

APPENDIX II—*continued*

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Inter-mediate List No.	*Detailed List No.*	*DISEASES* Cause Groups	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		Brought forward	629	240	16	2	1,733	883	6,965	8,561	432	283	110,059	68,573
AE 146	E929	Accidental drowning and submersion	—	—	—	—	—	—	—	—	—	—	2	—
AE 147	(*a*)E920	Foreign body entering eye and adnexa ..	1	—	—	—	5	—	4	2	—	—	262	87
	(*b*)E923	Foreign body entering other orifice	1	1	—	—	1	1	5	2	—	—	122	86
	(*c*)E927	Accidents caused by bites and stings of venomous animals and insects	1	—	—	—	8	7	23	18	—	2	417	178
	(*d*)E928	Other accidents caused by animals	—	—	—	—	1	1	3	3	—	—	114	85
	(*e*)E910, E911, E913–E915, 921–922 E924–E926, E930–E965	All other accidental causes	2	1	—	—	7	2	226	60	5	2	4,763	1,627
AE 148	E970–E979	Suicide and self inflicted injury	—	—	—	—	—	—	1	—	—	—	1	—
AE 149	E980–E985	Homicide and injury purposely inflicted by other persons (not in war)	—	—	—	—	—	—	2	1	—	—	9	5
AE 150	E990–E999	Injury resulting from operations of war ..	—	—	—	—	—	—	—	—	—	—	—	—
		Total	634	242	16	2	1,755	894	7,229	8,647	437	287	115,749	70,641

"N" CODE—ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONINGS AND VIOLENCE (NATURE OF INJURY)

RETURN OF PATIENTS TREATED AT GOVERNMENT HOSPITALS (EXCLUDING PATIENTS REMAINING IN HOSPITAL AT THE END OF 1956)

Intermediate List No.	*Detailed List No.*	*DISEASES*	*EXPATRIATES*						*NON-EXPATRIATES*					
			In-Patients		*Deaths*		*Out-Patients*		*In-Patients*		*Deaths*		*Out-Patients*	
			M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
		CAUSE GROUPS												
AN 138	N800–N804	Fracture of skull	9	—	—	—	9	—	32	6	8	1	123	11
AN 139	N805–N809	Fracture of spine and trunk	7	1	—	—	8	1	22	4	2	1	60	32
AN 140	N810–N829	Fracture of limbs	15	3	—	—	23	8	134	24	5	—	568	179
AN 141	N830–N839	Dislocation without fracture	1	—	—	—	1	—	28	10	—	—	806	265
AN 142	N840–N848	Sprains and strains of joints and adjacent muscles	2	2	—	—	20	6	39	16	—	—	1,916	656
AN 143	N850–N856	Head injury (excluding fracture)	8	—	—	—	11	—	42	6	2	—	210	75
AN 144	N860–N869	Internal injury of chest, abdomen, and pelvis ..	—	—	—	—	1	—	13	6	4	—	158	18
AN 145	N870–N908	Laceration and open wounds	9	1	—	—	52	12	214	46	3	1	5,218	1,814
AN 146	N910–N929	Superficial injury, contusion and crushing with intact skin surface	12	—	—	—	25	8	58	15	1	1	3,857	1,266
AN 147	N930–N936	Effects of foreign body entering through orifice	2	1	—	—	5	1	5	1	—	—	253	140
AN 148	N940–N949	Burns	4	—	—	—	6	1	31	38	1	4	760	319
AN 149	N960–N979	Effects of poisons	—	1	—	—	2	5	5	5	3	—	31	17
AN 150	N950–N959, N980–N999	All other and unspecified effects of external causes	1	1	—	—	44	21	133	34	3	4	1,722	894
		Total	70	10	—	—	207	63	756	211	32	12	15,682	5,686

G.P. O/318/59/450/4.59.